

# Economic Analysis and Problems



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# Preface

HE OBJECTIVE of the present text is to give the student a comprehensive introduction to modern economic life. In seeking this goal, an effort is made to achieve a proper balance between analysis and description. On the one hand, it is necessary to present in an adequate manner the facts and institutions of economic society. Such knowledge cannot, as a rule, be taken for granted. In most cases, neither previous training nor knowledge acquired outside of school has given the student a full and balanced appraisal of the world of finance, commerce, industry, and agriculture. Normally the beginner knows from personal experience something of the problems found in one or other of these broad categories. His knowledge of the rest is either deficient or oriented exclusively to his own background interests. Accordingly, one of the major aims of the present text is to give information and perspective in regard to significant conomic activities.

On the other hand, facts without analysis become meaningless. It is not enough to know how the economic system works; it is vital that some understanding be had as to why it behaves in a given manner. Unless a student appreciates the importance of economic law, he is tempted either to blind conservatism or wild and pragmatic experimentalism, as his temperament and background dictate. He may feel that the status quo is unchangeable or, conversely, he may sponsor projects on humanitarian grounds, without any real basis for judgment on their economic feasibility. Such emotional approaches render no lasting service to the cause which occasions them. Their ultimate effects may be reaction and distilusionment.

The objective sought is easier to state than to achieve. In the past, the major theorists have tended to work out their principles on the basis of limited assumptions. In such important fields as price, monetary theory, the business cycle, international trade, and distribution, these assumptions have been so narrow as to pose a difficult problem for the writer of textbooks. If he were to confine himself to a traditional presentation of theory, with the customary examples, he would find it difficult to integrate the treatment of principles with the portrayal of concrete problems. The temptation would be strong to emphasize one or other of these divisions, and to pass over lightly the one considered less important. Such an approach, however, would not solve the prob-

lem. Rather it would transfer the burden of reconciliation to trachers and students. If, for example, in the analytical section, little effort were made to use realistic examples, the student might feel that theory tended to be doctrinaire and unrelated to actual problems. If, on the contrary, analysis were neglected and description emphasized, the student would be deprived of valuable tools for understanding conomic law. Clearly, a reconciliation of the two is indicated, regardless of the difficulties involved in such an achievement.

At the present time, the task of integration is somewhat less difficult. The enormous strides taken by economic theory in recent decades have brought the goal of a unified presentation much nearer. Thus, the studies in monopolistic competition are definitely more realistic than earlier theories based on the assumption of pure competition. Monetary and business cycle theory have been more closely related. It is no longer necessary to assume that full employment is the normal state, with deviations to be corrected by price adjustments alone. Furthermore, great progress has been made in relating monetary and business cycle analysis to price theory, and both to the study of distribution. Of course, the final and definitive synthesis is yet to be written, but the results achieved thus far are really notable. Certainly they justify the writing of a textbook which attempts to include them in an elementary manner.

The present text aims to present such a timely and up-to-date treatment. It may be that the adjective "timely" can be abused in relation to textbooks. Writers have deplored the demand for frequent revisions merely to include statistics readily available in common reference manuals. In recent years, however, the changes have been more fundamental. Not only has theory advanced, but such factual compilations as the hearings and monographs of the Temporary National Economic Committee are of more than passing significance. Nor can the death of President Roosevelt pass unnoticed. Even though there is little likelihood of a reversion to earlier social and economic patterns, nevertheless one phase of intensive social reform and extensive government intervention in economic life has been concluded. This would appear to be a fitting time for a re-examination of the entire economic picture, in preparation for the problems which peace has brought to us.

In the attempt to achieve a unified and balanced approach, several chapters contain material not normally found in textbooks. Thus, Chapter XI is devoted exclusively to a portrayal of the price policies which govern the major fields of industry and trade. Such a concrete presentation gives a touch of life and reality to the abstract discussion of price theory. Again, two chapters have been devoted to the discus-

sion of general and American economic history. Obviously such presentations must be highly condensed. It is felt, however, that the genetic approach to problems through the study of their history presents them in a natural light, and it is less confusing to the student to find the historical treatment organized into two consecutivo chapters rather than scattered throughout the text. Again, the discussion in Chapter III of the underlying assumptions of the present economic system can be of pedagogical value. It may aid in restraining ardor for piecement solutions, which are inconsistent with the political and economic premises of modern society.

For the hardy-minded student who wishes to examine these premises, there are chapters on alternative economic systems. Here theory has again been supplemented by factual analysis. A brief discussion of economic policies in Sweden, Portugal, and the Soviet Union illustrates the varying approaches of a democratic, an authoritarian and a communist state. Most unusual in this connection is the inclusion of clapters on ethical and religious programs of social reform. Actually, it would seem that their exclusion would call for explanation. If space can be found for anarchism, guild socialism, and other movements with little practical effect upon economic life, it would seem reasonable to include noneconomic forces which have profoundly affected human conduct in the economic sphere. It would be possible, of course, to exclude all noneconomic forces as outside the scope of the present treatment, but this would logically preclude the discussion of such political movements as the New Deal or such philosophical systems as communism. Again, it might be safer to exclude controversial material, but the interests of the student would not be well served by such a process. In the fields of history, political systems, and the like, controversial issues have been presented squarely, with source material indicated.

The presentation keeps in view two types of students. In the first place, it is directed towards the needs of the beginner who is likely to take only one course in economics. Such a student wishes a fairly complete knowledge of economic life and problems, and also a grasp of the principles which will aid him in judging proposed solutions. Whether his ultimate goal be the study of law, medicine, the ology, science or other disciplines, he seeks an intelligent insight into this important phase of modern life. Without such knowledge, he often finds it difficult to fulfil his duties as a citizen, and to afford the leadership which may be expected of him. Secondly, the present work aims to serve as a foundation for advanced courses in the field of economics. A solid, comprehensive understanding of the entire field

prevents subsequent specialization from bringing about a narrowed perspective. Furthermore, such broad knowledge may aid a student in deciding more intelligently which field he would find suitable for

further study.

As an additional service to the teacher and students, the reading lists which follow the chapters are more extensive than is normally the case. This should facilitate the assignment of readings and papers. With abundant references at hand, a teacher is freed somewhat from the burden of personal direction of reports, essays, and the like. Furthermore, the student who may wish to follow up subjects of interest, even after his days of formal instruction are over, will find these lists a helpful guide. Moreover, in the Appendix suggestions are given as to further source material. The listing of periodicals, pamphlets, government reports, and nontechnical books will be useful both for the preparation of class papers and for subsequent reading.

The writer wishes to express his gratitude to those who aided in the preparation of this book. Many useful suggestions were received from fellow professors who read the manuscript. Again, the courtesy of the librarians at Enoch Pratt Free Library of Baltimore was complemented by the library's complete coverage of important economic literature. Finally, the writer wishes to acknowledge the kindness of the authors and publishers in permitting citation from works issued under their names. In particular, he wishes to thank Dr. Maxwell Silver; Benziger Brothers, the Brookings Institution; Harcourt, Braco, & Co.; McGraw-Hill Book Company; the Macmillan Company; the National Conference of Christians and Jews; Oxford University Press; Sheed & Ward; and the Twentieth Century Fund. Without all these aids, and the encouragement of friends and colleagues, the task would have been considerably more difficult.

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# PART ONE { ,

The Structure of the Economic System

# The Rise of Modern Commic Life

## THE HISTORICAL APPROACH

There are many possible ways of studying economic life. I would be feasible to take our century for granted and to analyzits problems simply as they present themselves in postwa America. Considering the perfection of modern technical achievement it would be understandable were we to dismiss the past as relatively insignificant and concentrate our attention upon conditions peculia to our time. Yet such chauvinism has its drawbacks. While the nine teenth and twentieth centuries have attained the unbelievable in me chanical excellence, they have lagged lamentably in economic, social and political controls over industry. Insecurity and exploitation have led many to question the lasting greatness of the present system. Schol ars of repute have doubted the survival of many of its features.

Given the diffidence of careful and even profound thinkers, and not ing the uncertainties which afflict contemporary American economists as witnessed in the pages of their journals,<sup>2</sup> it may be the part of wis dom not to take too much for granted. Many historians expect the middle decades of the twentieth century to be a turning point of his tory comparable to the fall of Rome or the Protestant Reformation. I such is really the import of current problems, it might be well to stand apart from the present-day American picture in the effort to gain per spective. This could be done both by studying the origins of modern capitalism and by analyzing alternative socioeconomic systems. The historical approach, however, serves better as an introduction to mod

<sup>1</sup>Cf J A. Schumpeter, Capitalism, Socialism, and Democracy (Harper) P. A. Sorokin, The Crists of Our Age (Dutton); and E. R. Walker, From Eco

nomic Theory to Policy (Univ. of Chicago).

<sup>&</sup>lt;sup>2</sup> A careful study of such estimable journals as the American Economic Review The Journal of Political Economy, The Southern Economic Journal, The Harvare Business Review, and similar publications bears out this point. To some degree there has been a broadening area of agreement on important problems, such as the question of how to achieve full employment. But at the same time deep cleavage remain among economists, while even greater pessinism is felt as to the possibility of co-operation by government, business, labor, and farm groups on policies recommended by these writers.

ern economic life. The analysis of comparative economic systems, involving as it does many controversial issues, is better left to the con-

cluding chapters of the study.

The pages of history help to clarify what is essential and what nonessential in our economic system. Thus, research has shown that many
of the mechanisms of modern commerce and finance were derived
from the early and late Middle Ages. Incorporation, insurance, banking, and the like can be traced at least to the fourteenth century.
Technical and mechanical achievements have antedated capitalism.
Yet it would be hasty to conclude that capitalism is merely a philosophy
or a code of principles. Principles and rules can modify institutions to a
profound degree. In the opinion of some scholars certain practices,
such as government intervention in economic life, are ultimately incompatible with a system of free enterprise and even political democracy. Judgments of this type label certain rules as essential to the
preservation of ideals generally accepted in the Anglo-Saxon world
today. Other writers disagree, and another controversy is born.

The existence of major controversies among scholars has cast a shadow over the social sciences. These disciplines do not share with the physical sciences the ability to predict the future with the certainty of invariable law. Yet it may be that the weakness of social studies has been exaggerated. The study of history, impartially pursued, yields a treasure house of generalizations which may well be called laws. With such a beginning we may hopefully advance to the study of current problems with reasonable certainty that we have some perspective and insight to assist us.

## THE CONTRIBUTION OF MEDIEVAL EUROPE

A Controlled Society. It is a commonplace that modern economic life developed out of medieval feudalism. Until recently, however, historians treated the growth largely as a result of accidental circumstances, such as the discovery of America. More careful research has revealed that the development was much more complex than was formerly suspected. Paradoxically, both the element of continuity and the sharpness of divergence have been more extensive than was realized in the last century. Strong elements of capitalism flourished throughout the entire medieval period, held in check by the even stronger bonds of feudal society. Only when these bonds were broken by a series of social crises was modern economic society born.

<sup>&</sup>lt;sup>3</sup> Cf. F. A. Hayek, The Road to Serfdom (University of Chicago) and L. von Mises, Bureaucracy (Yale).

To understand medieval economic life, two important points must be kept in mind. In the first place, the medieval period was a time of gradual reconstruction of society where anarchy had reigned. The fall of the Western Roman Empire was more than the overthrow of a government; it was the pulverizing of a great political and economic structure. The legions of Rome had enforced peace upon Europe. With peace went law and order. An extensive system of roads permitted commerce between the far-flung reaches of Europe. The sea lanes of the Mediterranean were open. Common languages and universal coinage gave the merchant every opportunity. Then, for reasons which still puzzle historians, the system collapsed. The invasions from the north merely gave the coup de grace to an empire whose vitals had long since wasted away. Bureaucracy and mismanagement had caten away the heart of Roman society, and the invader did not have the genius to reconstitute a nation, much less an empire. As a result law was replaced by anarchy, commerce declined to insignificance, the cities were depopulated, and only a rude agrarian economy remained. Such was the raw material bequeathed to medieval builders.

A second major feature of the Middle Ages was the prevalence of noneconomic controls. Until recently, in America, the relative autonomy of business was taken for granted. It was accepted that industry, finance, and commerce were qualified to run their affairs without outside intervention from any source. It was argued that since natural and inviolable laws governed such activities, interference would be courting disaster. Others maintained that only those with actual experience in these fields would be competent to give decisions in such delicate and involved matters. Such a position was modified in the United States, but only reluctantly, during the depression of the Thirties. It was abandoned completely in parts of Europe after both World Wars, where controls ranged from state regulation to outright totalitarianism.

In medieval times, regulation of economic life was primarily cthical and religious and secondarily the work of institutions, such as feudalism and the guild system, designed to implement these ethical demands. The modern mind finds it difficult to visualize the completeness of such controls. In the nineteenth century it was widely held that religion was a private matter affecting the personal life of the believer, but having no place in public affairs. The medieval ideal, on the contrary, was that of complete permeation of all activities by the

<sup>&</sup>lt;sup>4</sup> Cf. M. Rostovizeff, Social and Economic History of the Roman Empire (Osford) or, more briefly, J. W. Thompson, Economic and Social History of the Muldle Ages (Appleton-Century), chs. 1-6.

law of God. Accordingly, economic life in general was to be subordinate to spiritual and cultural pursuits and in detail it was to be governed by the laws of justice and equity. These aims were not merely the subject of sermons; they were embodied in such concrete institutions as the feudal codes, usury legislation, the guild system, and the regulations establishing a "just price." 1

Thus, medieval economic life involved reconstruction of society from anarchy, and this within the rather rigid framework of noneconomic rules which were imposed upon it. Individual traders and bankers rebelled against these restraints. Evasion and even rebellion were not uncommon. Gradually restiveness grew into outright revolt. Business groups achieved freedom to forge the massive structure of modern capitalism. The details of this development cast considerable light upon the nature of our present system.

Feudalism and Nationalism. It was only to be expected that early medieval economic life would be almost exclusively agrarian. In conditions of social disorganization, survival is the first goal. A complex commercial structure would have been impossible to achieve. The production of food, clothing, and other simple necessities, accordingly, constituted almost the entirety of economic activity. Even the techniques of agricultural production were crude. Soil-enriching plants were not known, so that land was periodically left fallow. In the attempt to divide lands of varying quality equitably, a system of scattered holdings for each peasant was instituted. A limited community life centered around small villages or the local manor, where the beginnings of specialization could be found. The blacksmith, the brewer, and the miller performed typical nonagrarian services.

The tiller of the soil was generally a serf, an "unfree" tenant who was bound to the soil. The term "unfree" is used by recent historians to distinguish the serf from the slave, who could be sold like a chattel, and from the free tenant, who could leave the manor if such was his choice. The origin of serfdom is obscure. In some cases, serfs were prisoners of war whose lives were spared in return for personal service. In most instances, however, serfdom took its origin from the practice of commendatio, whereby a peasant committed himself to the perpetual service of a master in return for military protection, so badly needed after the fall of Rome. In still other circumstances, it appeared to have stemmed from the patriarchal organization of Germanic tribes. At any

<sup>&</sup>lt;sup>5</sup> For a careful documentation of this thesis, cf. R. H. Tawney, Religion and the Rise of Capitalism (Harcourt); A. Fanfani, Catholicism, Protestantism and Capitalism (Sheed), G O'Brien, An Essay on Mediaeval Economic Teaching (Longmans); and E. J. Hughes, The Church and the Liberal Society (Princeton).

rate, the serf was bound to the service of the manor. He cultivated the lord's land besides his own and rendered additional community services, such as roadbuilding, in lieu of taxation.

Life on the manor was hard and crude. Many of the difficulties resulted from the conditions of the times, but in other cases there were exploitation and oppression. Perhaps the most balanced account of conditions is that given by a great Belgian historian:

The manorial organization was essentially patriarchal. Language itself bears testimony to this. What was the seigneur (senior) if not the elder, whose authority extended over the familia whom he protected? For, unquestionably, he did protect them. In times of war he defended them against the enemy and sheltered them within the walls of his fortiess, and it was clearly to his advantage to do so, since he lived by their labor. The idea we are accustomed to form of seigneural exploitation is perhaps a little summary. The exploitation of man implies the wish to make use of him as a tool to obtain the maximum of production. The rural slavery of the ancient world, that of the negroes in the colonies in the seventeenth and eighteenth centuries, or the condition of the workers in the great industries in the first half of the nineteenth century, furnish us with familiar examples. But all this is very different from the medieval manors, where all-powerful custom determined every man's rights and obligations. This fact alone was enough to prevent the pitiless severity to which the free exercise of economic supremacy gives rise under the spur of profit. Moreover, the whole idea of profit, and indeed the possibility of profit, was incompatible with the position occupied by the great medieval landowner. Unable to produce for sale owing to the want of a market, he had no need to tax his ingenuity in order to wring from his men and his land a surplus which would merely be an encumbrance, and as he was forced to consume his own produce, he was content to limit it to his needs.6

Nevertheless, it must be noted that serfs normally sought emancipation. This was particularly true when labor shortages occasioned by the Black Death (1349) led to a widespread breakdown of serfdom in Western Europe.

Serfdom was but one phase of the wider institution of feudalism. Feudalism was a system of personal service based on land grants by a ruler to his followers. At the head was king or emperor. The intermediate stratum consisted of lesser nobility and clergy, with the serf at the bottom. The bond between these groups was more akin to personal loyalty than political sovereignty. Feudal law was generally

<sup>&</sup>lt;sup>6</sup> H. Pirenne, Economic and Social History of Medieval Europe (Harcount), p. 64, cf. also J. W Thompson, op cit., pp. 255, 676 fl, 750-751; B Janett, Social Theories of the Middle Ages (Newman), pp. 104 fl; II Heaton, Economic History of Europe (Harper), chs 6-7; R. A. Dixon and E. K. Eberhart, Economics and Cultural Change (McGraw-Hill), ch. 4; and the Cambridge Economic History of Europe (Macmillan), Vol. I.

a collection of immemorial customs rather than decrees by a ruler. Indeed, the ruler was considered bound by these laws to the same degree as his followers. They could and did revolt if he failed to observe his coronation oath to rule justly and according to law. Even the serfs had rights which they could enforce against their lords. Labor historians eager to discover the origin of the "sit-down strike" could find parallels in the cases of serfs who refused services until rendered their just rights."

The rigid system of feudalism worked successfully in the agrarian phase of medieval economy. It was less adaptable to the problems of commerce and industry. As a result, the great merchant traders first demanded exemption from feudal law and custom and ultimately fought the institution itself. They encouraged kings to form a national state with absolute sovereignty possessed by the ruler. The working out of this process is an interesting example of the impact of economic forces upon political life.

The Rise of Commerce and Industry. The disruption consequent upon the fall of Rome led to an almost total breakdown of commerce, since the passing of the Western Empire resulted in the virtual closing of trade routes. Roads were neglected. Robbers on land and pirates at sea, the Turk in the Mediterranean and the Viking in the North, made travel hazardous. The levying of tolls by each feudal lord and baron added to the prohibitive risk. A thin trickle of commerce with the Orient was maintained by the Jews, who thus secured a precarious living. A few enterprising cities, such as Venice, were strong enough to carry on maritime trade with the Orient, receiving silk, spices, and other luxury items in return for slaves, iron, timber, and other raw materials. With commerce at such a low ebb, there was little room for industry and finance. Some trading centers supported a sound monetary system based on gold and silver, but large-scale financial transactions did not exist in the early Middle Ages.

The revival of commerce was initiated by the *Crusades*, a series of expeditions to open the routes of pilgrimage to the Holy Land. While the motivation behind the Crusades was primarily religious, the economic implications of these great mass movements were far-reaching.

<sup>&</sup>lt;sup>7</sup> For a thorough documentation of the thesis of medieval equality under law, the masterful six-volume study of R. W. and A. J. Carlyle, Ilistory of Medieval Political Theory in the West (Putnam), is unsurpassed. For a briefer treatment, cf. C. H. McIlwain, The Growth of Political Thought in the West (Macmillan), and A. J. Carlyle, Political Liberty (Oxford). On feudalism, cf. C. Stephenson, Mediaeval Feudalism (Cornell), C. Dawson, The Making of Europe (Sheed); and various articles in the Encyclopaedia of the Social Sciences and the Cambridge Medieval History.

They opened the routes of commerce, stimulated the desires of multitudes for the riches and luxuries of the East, and thus revitalized the economic life of Europe. For many, the bonds of feudal custom were broken. They longed for more of the freedom which they had experienced for the first time.

As commerce revived, the town returned to its position as a center of population. Instead of a few small cities which survived as ecclesiastical or military centers, thriving and populous towns were to arise in Italy, France, Germany, and the Low Countries. Near these towns great fairs were held to assist in the exchange of goods. An important aspect of the fairs was the exchange of money and the gradual building up of a financial system. Another by-product was the development of merchant law to supplant feudal customs and obligations, such as personal service, ill-suited for an expanding commercial economy. The traders obtained exemption from these customs by purchase of rights from the local lord, or even by force. Further, merchants banded together to obtain protection from robbers and brigands. The ultimate development of this trend was the formation of powerful associations, like the Hanseatic League, which were able to obtain major concessions for their members. Thus the groundwork was laid for the national state which was to supplant feudalism.

The growth of commerce led naturally to an expansion of industry to furnish the materials of trade. Northern Europe specialized in textiles, although the Florentine woolen industry was a successful competitor to Flanders. The Belgian towns received high quality wool from England and were able to produce fabrics unequalled for finish, flexibility, softness, and color. The linen of Ypres was known throughout Europe, as were the dyes of Florence. Venice achieved a remarkable record in glass making, exporting beads, hollow ware, mirrors, lenses, and enameled glass. Specialization and division of labor, together with large-scale production, were not unknown, even though much work was done in small shops and in homes.

Another natural result of commercial expansion was the development of financial techniques. Many cities, such as Florence, realized the value of a stable monetary unit. In addition, the extensive levies made to finance the Crusades led to the development of banking methods. The Knights Templar, with houses throughout Europe and the Onent, possessed the equivalent of an international banking system. An elaborate system of exchange was a by-product of the far-flung activities of the Papacy and the Roman ecclesiastical curias. Full-fledged international banking was achieved by the Italian merchants, called Lombards, who were powerful enough to make loans to kings and ma-

tions. At the same time bookkeeping, insurance, incorporation, and other such techniques were evolved in Italian cities. Compared to these activities, the small-scale operations of the Jewish moneylenders

appear to be insignificant.8

While commerce thus developed to great proportions, the noncconomic controls noted earlier continued to function. As applied to commerce and industry, control over economic life was closely associated with the guild system. The guilds were associations of traders (merchant guilds) or craftsmen (craft guilds). Their origin is obscure, although the need of mutual protection would furnish an adequate reason for their existence. Regardless of origin, their function is clear. They regulated commerce and industry according to the ethical standards of the time. Thus the merchant guilds took steps to prevent monopolistic price-setting, misrepresentation or adulteration of products. and similar activities inimical to the common welfare. The ideal was a "just price" which would cover legitimate expenses and yield a moderate profit. The price was determined by the guild, by civic authorities, or by custom. Likewise the craft guilds sought to protect both the worker and the consumer from exploitation. The terms and conditions of apprenticeship were set, as were the standards whereby a journeyman could become a master workman and employer. At first, these guilds were regulated in a democratic manner. Towards the close of the Middle Ages, however, the guilds became actuated by entirely different motives. The merchant guilds became antisocial monopolists, while the craft guilds were dominated by masters who exploited their workmen cruelly.9

Noneconomic controls likewise operated in the field of finance. *Usury* was condemned by the Church, with the result that much moncy-lending was frowned upon and impeded. Usury was defined as the exaction of a charge for a loan as such. A fee might be levied because of extrinsic conditions such as a loss incurred, or even a prospective gain precluded because of the loan. It was also permitted to charge

<sup>8</sup> Cf. J. W. Thompson, op. cit., Vol. I, ch. 28; Vol. II, chs. 2, 5, 17; II. Pirenne, Economic and Social History, ch. 6; G. Clune, The Medieval Guild System (Dublin: Browne and Nolan); A J. Penty, A Guildsman's Interpretation of History (Sheed); J. Husslein, Democratic Industry (Kenedy); and the Encyclopaedia of

the Social Sciences, "Guilds."

<sup>&</sup>lt;sup>8</sup> For a full treatment of the growth of commerce, industry, and finance, cf. J. W. Thompson, Economic and Social History of the Middle Ages and Economic and Social History of Europe in the Later Middle Ages (Appleton-Century), passim; H Pirenne, Medieval Cities (Princeton), and Economic and Social History of Medieval Europe (Harcourt), chs. 1, 3, 4; S. Baldwin, Business in the Middle Ages (Holt), R. A. Dixon and E. K. Eberhart, op. cit., chs. 5–6; H. Heaton, op. cit., chs. 8–10; and the Cambridge Medieval History.

a fee to insure against the risk of loss or to compensate for tardy tayment. But extortion based merely on the need of the borrower was considered immoral. These regulations did not cause serious difficulty in the agrarian period of the Middle Ages, but they were definite impediments to the fully developed commerce of the thirteenth and later centuries. As a result, serious conflicts arose between the rising merchant class and the institutions fostered by the Church. It was not until the nineteenth century that canonists recognized the general welfare of industrial society, evidenced by the universal legalizing of interest-taking, as an extrinsic title justifying the general taking of interest on loans.<sup>10</sup>

The result of ethical control of economic life was the generation of restiveness and revolt on the part of the so-called "middle classes" (thus designated as a group between the nobility and the peasant). The earliest symptom of revolt was the failure of individuals and groups to conform to the law. Some groups, such as the Jews, were exempt as nonbelievers. They naturally took to trading and moneylending, the more so since persecution deprived them of opportunities to own land. Others, who were at least nominal Christians, flaunted these regulations. There were many reasons for this independence. Travel removed men from the restraining bonds of public opinion. The merchant who was a stranger in the town felt emancipated from the need of conforming to the ethical standards of his native village. He justified himself by asserting that with widespread trade the increased element of risk wananted greater profits. To many, religious sanctions were weakened when they departed from their remote shires and hamlets, leaving behind the vicar and church of their youth. To them the two were so intertwined that separation from one meant abandonment of the other. Accordingly, a new and independent class arose. Thus, Jacques Coeur became immensely wealthy in the fiftcentle century, while even earlier the Lombards were noted bankers. Yet, such individual defections did not shake the rigid framework which bound economic institutions. Even the great German banking house of Fugger consulted Roman curias on the morality of its transactions.

Beginning with the fourteenth century, definite and organized attempts were made to wipe out noneconomic controls over business. The first manifestation of this trend was the effort to replace feudalism by the national state. In France and England, particularly, business

<sup>&</sup>lt;sup>10</sup> Cf. "Usury" in the Jewish Encyclopedia, Hastings Encyclopedia of Religion and Ethics, the Catholic Encyclopedia, The Encyclopaedia Britannica, and the Encyclopaedia of the Social Sciences, also B. Dempsey, Interest and Usury (American Council on Public Affairs); P. Cleary, The Church and Usury (Dublin: Gill), and G. O'Brien, An Essay on Medieval Economic Teaching (Longmans).

groups attempted to strengthen the hand of the king in opposition to the feudal nobility. A unified state would mean law and order; a strong police and military protection of trade; uniform weights, measures, and coinage; and a breakdown of guild restrictions upon industry and commerce. The result was a strong upsurge of nationalism throughout Europe. This movement was to coincide with the Protestant Reformation, which disputed the authority of the Church, already weakened by grave internal crises. The anarchy of the Black Death, the exile of the Popes to Avignon, and the weakening of the spiritual authority of the Church through the accession of unworthy men to positions of influence all contributed to the impairment of ethical controls. The result was a widespread collapse of the framework which had regulated medieval economic life. Labor was exploited. The consumer was defrauded. The era of competitive capitalism was at hand.

### REVOLUTION IN INDUSTRY AND COMMERCE

Nationalism was to have an immediate and beneficial effect upon commerce. In France and England alike, every effort was made to remove barriers to trade and to give positive help to merchants. Benefits which we take for granted today, such as a road and postal system, largely originated at this time. Strong armies and navies were raised to protect the caravans and fleets of commerce. At times, industry found that it had east off guild regulation only to find itself under state control. But such intervention was meant to be in the interest of the business men themselves. It was a means of strengthening nascent industry and commerce, not a measure of social reform. The end product of these developments was such a flowering of world commerce that it has been called the commercial revolution.

The Commercial Revolution. Among the sparks which touched off world-wide expansion of trade was the movement of exploration and discovery which concluded the fifteenth century. In short succession, Bartolomeu Dias rounded the Cape of Good Hope, Christopher Columbus discovered America, and Vasco da Gama made a successful and highly profitable voyage to India. A few decades later, Fernando Magellan circumnavigated the globe. These developments were no accidents. The steady growth of commerce which characterized the Middle Ages led to the discovery of navigational techniques used by

<sup>&</sup>lt;sup>11</sup> This process is described by E. P. Cheyney, *The Dawn of a New Era* (Harper); in the concluding chapters of Pirenne and Thompson, cited above; and in Heaton, *op. cit.*, chs. 12–16. For readings on the religious aspects of the movement, cf *infra*, ch. 26.

these bold adventurers. Long before the voyages of the daring Portuguese, Spanish, and Italian sailors, tenuous contact had been established with the Orient. A hazardous and intermittent trade by way of tortuous, dangerous land routes had furnished enough knowledge of the Orient to arouse cupidity for safer and more extensive connections. Immense fortunes were expected from the land of jewels and gold.

The discovery of gold in Mexico seemed to portend the realization of all these hopes. There resulted a frantic scramble by the powers of Europe to stake a claim in the New World. England, France, Holland, Spain, and Portugal each claimed a share of the vast uncharted realm. Great trading companies were organized, either as partnerships or corporations, and given exclusive license to trade in these new regions. Not all were successful in finding gold, but spices, furs, tobacco, sugar, and tropical fruits were not unacceptable as substitutes. The dream of colonies and empire was dreamed in the parliaments and chanceries of the Old World, as profits soared to unprecedented heights. Greatness could be had by peoples who were but enterprising enough to seize opportunities which lay before them.

An immediate result of the scramble for political and economic power was the growth of statism. Powerful and enterprising rulers, often raised to their position through the support of the business classes, now threw the entire resources of government behind the new trend. In France, particularly, measures not too dissimilar to twentieth century totalitarianism were taken in the effort to gain the ascendancy. Louis XI, Charles VIII, and, above all, Louis XIV and his minister, Colbert, instituted an iron discipline in an attempt to strengthen industry and trade. Taxes were multiplied to support the new army and fleet, but every effort was made to stimulate business. Rivers were dredged, bridges built, roads improved, and bothersome feudal tolls removed. Mineral exploitation was encouraged. New industries, such as silk making, were imported. The markets and fairs disrupted by the Hundred Years' War were restored. Commerce, formerly considered beneath the dignity of the aristocracy, was fostered. Home industries were protected from foreign competition, while wages were kept to the level of exploitation in the attempt to capture world trade. Thus, in a crescendo beginning at the close of the fifteenth century and reaching its apogee in the seventeenth, France became a world power.

England followed a similar policy. As a result of the Hundred Years' War, English nationalism and patriotism had been intensified. The Wars of the Roses determined that the Tudor dynasty should have absolute power. Henry VII did much to unify and strengthen the na-

tion, but Elizabeth inaugurated a golden era. She drove out forcign merchants and fostered English enterprise. It was during her reign that much of the important colonization of America took place. Soon a great system of roads was to encourage internal commerce. Revolutionary, also, was the effect of the enclosure movement, or the expropriation of peasant land by great landlords. Since the commercial grazing of sheep was becoming increasingly profitable, it was desired to oust small farmers and turn their lands into pasture. Every type of pressure, legal or extralegal, was used to regain possession of the holdings tilled by the yeomen of England. The movement from the land, begun when the Black Death led to a shortage of labor, increased apace. The immediate result of this movement was further stimulation of world trade. An indirect result was the migration to the cities of thousands of peasants, later to furnish the labor for the factories resulting from the industrial revolution.

Statism produced an economic doctrine, mercantilism, as well as a political policy. It was felt that a nation would become great if domestic trade and industry were fostered and international trade expanded. The former was accomplished, not only by stimulation and subsidy, but also by a direct policy of protectionism. Competing foreign goods were excluded by tariffs and embargoes, so that infant industry would find a favorable environment in which to grow. The encouragement of foreign trade also helped domestic industry, since it gave manufacturers an expanded market. Wages had to be kept low so that goods could compete in the world market. A by-product of this policy was the quest for a favorable balance of trade, whereby exports of goods and commodities would exceed imports. Since, obviously, some imports must be received to pay for the exports, the additional imports were accepted in the form of gold and silver. This policy of bullionism not only made an export surplus possible, but it was held to strengthen the internal economy of a nation. By expanding the supply of money, it permitted extension of business and industry without the handicaps of a currency shortage. Indeed, insofar as it promoted inflationary price rises, it tended to stimulate business by increasing profits. Furthermore, it was supposed to increase a nation's independence in time of war, because it made feasible emergency purchases from the country's reserves. Since this new policy coincided with the discoveries of gold in the New World, it was possible for several great trading nations simultaneously to pursue mercantilist trade policies. Nevertheless, this system involved the regulation of the many for the benefit of the few. It might well be considered the foster mother of monopolies.

The days of mercantilism were nonetheless numbered. By an inner dialectic which would have warmed the heart of Marx, it built up the forces which led to its own dissolution. As industry and commerce grew in strength, they fretted at the bonds of state regulation. They demanded and ultimately secured freedom. Indeed, as often happens, the pendulum swung to the other extreme. Business demanded absolute freedom. Laissez faire became the motto of the day, as François Quesnay in France and Adam Smith in England wrote their economic treatises proving that such was the law of nature.

Nationalism passed through two distinct phases as the problems of the bourgeoisie grew in magnitude and definition. During the nascent phase the demand of the bourgeoisic was for a government which was strong within, to rule both the Church and the nobility in the interests of mercantile prosperity, and inesponsible without, to aid the fierce competition of merchants for the control of new routes and new regions. This was the period of absolute monarchy and world conquests. Then, having used the king to attain their ends against the forces of feudalism and the rival states in world trade, the entrenched middle class used the growing masses of the population to gain more complete control of the national state by means of representative government. Gradually, the political powers passed from the king into the hands of the direct representatives of the bourgeoisie. In limited monarchies and so-called democracies, the significant powers of state such as appropriations for foreign acquisitions or internal improvements (mostly to further trade) rested with the lower house of the legislature, the direct representatives of the bourgeoisic. Even the constitutions reflected the control of government by business interests. Property and contract became the primary concern of all such fundamental documents.12

Indeed, many of the eighteenth and nineteenth century revolutions and wars were motivated more by the desire for business freedom than for personal liberty. The American and French revolutions and even the English revolt under Cromwell in the seventeenth century were not mere reactions to political oppression. For many years to come, representative government was to be less than responsive to the desires of the great masses of the population. It was not until the twentieth century that the struggle for economic freedom as a complement to political rights was to bear substantial fruit.

The Industrial Revolution. The revolutionary expansion of commerce was bound to affect industry. At first, the production of woolen and cotton cloth could be handled by spinners and weavers working

12 R. A. Dixon and E. K. Eberhart, op. cit., pp 332-333; cf ibid., chs. 7 and 8 for a concise treatment of the commercial revolution. Also of interest are J W. Thompson, op cit., Vol. II, chs. 21-23; II. Heaton, op. cit., chs. 12-16; J. L. and B. Hammond, The Rise of Modern Industry (London: Methuen), chs. 1-7; and L. Packard, The Commercial Revolution (Holt). The last-named book has a brief critical bibliography, compiled in 1927.

in their own homes. Itinerant jobbers were able to tour the countryside, leaving raw materials and collecting the finished product, to be sold in the great city and foreign markets. But as commerce grew, it was found difficult to keep up with the demand through such primitive methods. The best scientific minds of England and France were put to work at seeking better techniques of production. As a result of this quest, and not through any accidental discoveries, radically new forms of production arose.

The new machines were many and diverse. First the flying shuttle (1733) speeded up weaving, since it permitted one man by means of a string to operate a wide loom. Then, the spinning jenny (1767) and the cotton gin (1793) permitted the production of thread to keep up with the weaving operations. Arkwright and Crompton so improved spinning machinery that heavy factory installations became possible. To restore the balance between thread and finished cloth, Cartwright developed a power loom. In a relatively short time this great industry was mechanized.

Heavy machinery demanded power to turn the wheels. At first water power or even the power of draft animals in a treadmill were used. In the meantime, steam engines had been developed by Newcomen and Watt in an attempt to improve pumping operations at tin and coal mines. As the first crude models were improved and straightline motion of the piston had been converted into circular motion, the steam engine was used as the motive force in the new factorics. The result was a signal expansion of production. Power contributed the energy of hundreds of men, while untiring machines duplicated the work of skilled fingers. Furthermore, power was to revolutionize transport as well as production. The earlier development of commerce was to lead to better roads, canals, and the great clipper sailing vessels. But steam led to the railroad and the steamship. Subsequent refinements and discoveries, such as the steam turbine (1884), the internal combustion engine (1876), the Diesel engine (1897), the dynamo and electric motor (1867 and following), further accelerated both industry and commerce. In addition, the telegraph (1836), the telephone (1875), and radio (1896) gave the advantage of instantaneous communications. Man now had at his disposal resources beyond the dreams of the most sanguine prophet. The harnessing of atomic energy in 1945 surpassed the fantasies of Jules Verne.

New materials were needed to feed the ever-hungry machines. Oil was discovered in abundance throughout the world. Iron and, later, steel proved to be the ideal material from which the new machines could be made. Particularly important were the Bessemer and open-

hearth processes for the making of steel, for without steel great buildings and high-speed machinery would have been impracticable. More recently, the discovery of the light metals and synthetics opened even greater horizons for industrial expansion.

Only a one-sided picture could be obtained by stressing exclusively the physical aspects of production. Concurrently with the development of machinery went growth in factory techniques, such as division and specialization of labor and mass production. Research was stimulated. Marketing and distribution methods were improved. Above all, financial techniques were refined to accommodate the immense growth of industry and commerce. While the rudiments of the modern banking and investment system could be found in medieval Italy, their growth and perfection during the nincteenth century were phenomenal. Literally, the world had undergone a revolution.

In all these developments, there was continuity and even a certain inevitability. The growth of commerce during the Middle Ages was the direct ancestor of the commercial revolution, and from the expansion of commerce naturally came the expansion in industry. The entire process evolved with the inner logic and cohesiveness of a Shakespearean drama. A clue to the cause-and-effect character of these events is found in the simultaneous invention or discovery of most of the major technical developments of recent centuries. France, England, Germany, and the United States are rival claimants of priority in nearly every great advance in technology. Only recently Brazil was offended when the United States advanced a claim for discovering the airplane. Radar was perfected simultaneously by the United Nations and the Axis powers in the Second World War. These things were found because men were looking for them. The demands of commerce led almost inexorably to the industrial revolution. It could truly be said that need was the mother of invention.

The element of continuity is stressed because of its subsequent importance to the question of control of economic life. If nations are at the mercy of unpredictable developments, then men might despair of ever harnessing the giant which their genius had produced. But if law and reason rule in the sphere of economics, as they do in the domain of physics, then there is hope of applying to the future the lessons of the past. It is not meant to suggest that economic life is ruled by an iron determinism of the Marxist variety. Cultural and social factors played their part in the revolutions as they did in the Middle Ages. Economists today concede that the "economic man" governed by intelligent self-interest, rather than by all the intangible elements which flow from human freedom, is a myth. But without insisting that eco-

nomic forces are the only influences upon society, it is well to understand that they are substantially orderly and predictable.14

Individualism and the Social Question. The saga of industrial progress is not a story of uninterrupted triumph. While there was much that was brilliant and even glorious, there was another side to the story, sordid, cruel, and disillusioning. Interspersed with the achievements of technology and enterprise was naked exploitation. Man's inhumanity has gone to greater excesses in the passion of war; men have been harsher under the spell of primitive savagery; but Christian nations have rarely, if ever before, practiced the callousness which was an offshoot of the industrial revolution. This is a fearful indictment, but the documents of the time permit no other conclusion. Hammond sums it up in somber words:

Thus England asked for profits and received profits. Everything turned to profit. The towns had their profitable dirt, then profitable slums, their profitable disorder, their profitable ignorance, their profitable despair. The curse of Midas was on this society: on its corporate life, on its common mind, on the decisive and impatient step it had taken from the peasant to the industrial age. For the new town was not a home where man could find beauty, happiness, leisure, learning, religion, the influences that civilize outlook and habit, but a bare and desolate place, without colour, air or laughter, where man, woman and child worked, ate and slept. This was to be the lot of the mass of mankind: this the sullen rhythm of their lives. The new factories and the new furnaces were like Pyramids, telling of man's enslavement, rather than of his power, casting their long shadow over the society that took such pride in them.<sup>14</sup>

No group in the population escaped exploitation, but it seemed that the hardest blows were reserved for the weakest.

The exploitation of children was pitiful. They went to work often at the tender age of seven or eight, worked from six in the morning until eight at night, often with no regular times for meals, eating what food they could snatch amid the dirt and grime of the factory. Others were subjected to the brutality of sweeping chimneys by climbing

14 J. L. and B. Hammond, op cit., p 232; cf. the authors' The Town Labourer (Longmans) for a more detailed description of exploitation and oppression, E. P. Cheyney, Industrial and Social History of England (Macmillan). A Toynbee, The Industrial Revolution of the Eighteenth Century in England (Longmans), and P Mantoux, The Industrial Revolution in the Eighteenth Century (Harcout).

<sup>&</sup>lt;sup>18</sup> For a treatment of the economic aspects of the industrial revolution, cf. F. C. Dietz, *The Industrial Revolution* (Holt); R. A. Dixon and E. K. Eberhatt, op. ctt., chs. 9-10, J L. and B. Hammond, op. ctt., chs. 7-11, II. Heaton, op. cit., chs. 17-30, W Bowden and others, An Economic History of Europe Since 1750 (American Book Co.), and J. H. Clapham, An Economic Ilistory of Modern Britain (Macmillan). The bibliography in Bowden is exhaustive.

through their tortuous passages, at times with fires going below. Children worked in the mines, where their mothers were harnessed to carts like beasts, dragging the coal to the surface as they crawled on hands and knees. At nights, they straggled home to hovels which were wretched beyond description. Whole families were crowded in single small rooms of decrepit, rotting tenements. As the crowning irony, they might, if they would, listen to lecturers crusade against the cruelties of Negro slavery with such success that the conditions of slaves soon far surpassed those of English freemen in the slums of Manchester. Nor were conditions one whit better in France, where in rush seasons children worked night as well as day, being kept awake by the lash. It is hardly to be wondered that drunkenness and debauchery became common in the industrial cities. Bad as were these conditions, miscry was intensified by the recurring crises which were the plague of industrialism. Unregulated speculation led to periodic collapse, while thousands pondered the bitter meaning of the verdict "no work." The business cycle, with its sickening sequence of boom and bust, was to plague society. The worker became too often a proletarian, bereft of ownership of tools and home, stripped of his skills, completely dependent upon wages-and these in turn at the mercy of an economic system which sought unlimited gain for the few instead of livelihood for all.

All these abuses were excused on the grounds that they were inevitable. In reacting against statism, economists and philosophers argued that *freedom* was a prime requisite for a prosperous industrial state. Even though such liberty was to lead many to exploitation and oppression, it was argued that the laws of competition would transmute man's selfishness into the general good. Adam Smith proved that it was good economics, and Jeremy Bentham demonstrated that it was solid ethics. Jean Jacques Rousseau taught that nature alone was good and that the less society interfered with freedom, the better men would be. Thomas Malthus cited the laws of population to show that wretchedness was unavoidable, David Ricardo established the iron law of wages, while Herbert Spencer proved that all this was part of a universal and farseeing benevolence. Naturally, who could quibble when learned men thus agreed.<sup>15</sup>

It might have been expected that even with such justification, the religious conscience of mankind would have rebelled against these conditions. Yet even here a blind spot had developed. While Christians rose in horror against the slave trade, they tolerated economic slavery at home. Indeed, according to Weber, Troeltsch, and Tawney, re-

<sup>&</sup>lt;sup>15</sup> For a provocative, at times almost savage, attack upon this philosophy, of E J. Hughes, The Church and the Liberal Society (Princeton).

ligious opinion now reinforced the economics of individualism.18 It has been noted that the ethical and religious controls of the Middle Ages had been destroyed by the onrushing forces which led to the commercial revolution. The inroads of the Reformation prevented any counterattack until the nineteenth century, when Villeneuve-Bargement and De Mun in France, Ketteler in Germany, and Manuing in England started a movement which was to have important results in promoting social reform.17 Both the leaders of the Reformation, Luther and Calvin. thundered against the social abuses of their day. But later developments were to produce different results. Gradually the idea of individualism in religion and morality led to a restriction of the latter to the private life of the believer. Men whose private lives were exemplary for integrity and honesty felt no compunction in driving a hard bargain with their workers or customers. As Frederick Lewis Allen points out in his Lords of Creation, capitalists who made millions in fraudulent stock deals or unscrupulous business tactics left these same millions to churches in a spirit of apparent picty. When trained canonists and skilled theologians were hard pressed by the developments of the fifteenth century, one is hardly surprised that busy financiers failed to develop a detailed moral code for the stock market or the corporation.

The followers of Calvin reached similar results by different paths. The doctrine of predestination led believers to seek some sign of divine favor so that they might know their predetermined fate. It was logical to find such a sign in a blessing upon one's calling. Since most men were called to worldly endeavor, success in business was to become identified with godliness. The earlier virtues of charity and humility were to be replaced by the "economic virtues" of diligence, shrewdness, and energy. Now man's entire energies could be concentrated upon the taming of the material world.

The shrewd, calculating commercialism which tries all human relations by pecuniary standards, the acquisitiveness which cannot rest while there are competitors to be conquered or profits to be won, the love of social power and hunger for economic gain - these irrepressible appetites had evoked from time immemorial the warnings and denunciations of saints and sages. Plunged in the cleansing waters of later Puritanism, the qualities which less enlightened ages had denounced as social vices emerged as

17 Described in P T. Moon, The Labor Problem and the Social Catholic Move-

ment in France (Macmillan).

<sup>16</sup> M. Weber, The Protestant Ethic and the Spirit of Capitalism (Scribner); E Troeltsch, The Social Teaching of the Christian Churches (Allen and Unwin); R. H. Tawney, Religion and the Rise of Capitalism (Harcourt); and A. Fanfani, Catholicism, Protestantism and Capitalism (Sheed).

economic virtues. They emerged as moral virtues as well. For the world exists not to be enjoyed, but to be conquered. Only its conquerer deserves the name of Christian. For such a philosophy, the question, "What shall it profit a man?" carries no sting. In winning the world, he wins the salvation of his own soul as well. 18

Since poverty was a punishment for sin, the poor deserved their wretchedness. Such was the comforting and consoling teaching which blinded men to the misery of their fellows.

The exploited were not without their defenders. As was noted above, outstanding religious leaders in several countries raised their voices in protest. Nor were these merely empty pleas. Often they led to the formation of political parties who pressed for and obtained social legislation. Again, socialism and communism arose in reaction to the abuses of industrialism. Many of the socialists, paradoxically, were from the aristocratic strata of society. Indeed, in England some of the first reforms were sponsored by To1y landlords. Labor unions commenced their weary struggle for the rights of man. Gradually conditions were alleviated until the worst abuses of exploitation were removed from industrial Europe. Less successful, however, was the attempt to remedy the insecurity which likewise was the curse of the new economic world. This insecurity was to be a potent force leading to the breakdown of democracy and the advent of the dictator states in Europe between the World Wars. Today the uncertainty of economic life remains as the great challenge to the economist and the statesman.19

The history of the past poses many problems for the future. The story of the past nine centuries might be described as one of uninterrupted economic expansion together with various attempts at control over economic life. On the one hand, there is clear evidence of the immense expansive power of industry and commerce. The marvels of technical genius, the tremendous growth in population, and the constant increase in living standards all attest to this. On the other hand, there is the fact that control over this system is considered to be of the highest importance. In the Middle Ages the control was primarily ethical. Under mercantilism, it was political. The industrial revolution was to witness autonomy of business and finance. Autonomy in its turn was to lead to a social problem so severe that new controls were imposed, ranging from the socioeconomic laws of modern democracies to the absolute domination of communist and fascist totalitarianism.

<sup>&</sup>lt;sup>18</sup> R. H. Tawney, op cit, p 249.

<sup>&</sup>lt;sup>19</sup> For further material on reactions to these conditions, cf. infra, clis. XXIV and XXVI.

Such is the general pattern of modern economic life. Our next step is to study the place of the United States in this complex picture.

In the study of history from the viewpoint of the economist, two extremes are to be avoided. On the one hand, it is dangerous to ignore the warnings afforded by events of the past. Particularly in a young nation, there is the tendency to regard the experience of others as merely an irritating example of their inadequacy. It is sometimes felt that where many things are new, everything can be new. On the other hand, it is equally foolish to consider the past as a rigid and inexorable pattern which must of necessity determine the future. Daring and experimentation can win through where others have failed. Thus, in the chapter to follow, it will be noted that the American pattern was both alike and different from the European pattern of economic development. For this reason, a careful study of our own history forms an excellent background for the understanding of modern problems.

# Readings and References

### GENERAL

For the economic history of the period the following books, arranged according to the periods covered, may be useful: M. Rostovtzell, Social and Economic History of the Roman Empire (Oxford); P. Bossonade, Life and Work in Medieval Europe (Knopf); H. Pirenne, Economic and Social History of Medieval Europe (Harcourt) and Medieval Cities (Princeton); J. W. Thompson, An Economic and Social History of the Middle Ages (Appleton-Century) and An Economic and Social History of Europe in the Later Middle Ages (Appleton-Century); H. Henton, Economic History of Europa (Harper); R. A. Dixon and E. K. Eberhart, Economics and Cultural Change (McGraw-Hill); E. P. Cheyney, The Dawn of a New Era (Harper); S. Baldwin, Business in the Middle Ages (Holt), L. Packard, The Commercial Revolution (Holt); F. C. Dietz, The Industrial Revolution (Holt); W. Bowden and others, An Economic History of Europe Since 1750 (American Book Co.); J. L. and B. Hammond, The Rise of Modern Industry (Harcourt Brace) and The Town Labourer (Longmans); and A. Toynbee, The Industrial Revolution of the Eighteenth Century in England (Longmans). F. C. Dietz, An Economic History of England (Holt), is useful.

On the subject of noneconomic influences see: P. A. Sorokin, The Crisis of Our Age (Dutton) and Social and Cultural Dynamics (American Book Co.); G. O'Brien, An Essay on Mediaeval Economic Teaching (Longmans); A. Fanfani, Catholicism, Protestantism and Capitalism (Sheed); R. W. and

A. J. Carlyle, History of Medieval Political Theory in the West (Putnum); C. Stephenson, Medieval Feudalism (Cornell Univ Press); R. H. Tawney, Religion and the Rise of Capitalism (Harcourt); and E. J. Hughes, The Church and the Liberal Society (Princeton).

### **TEXTBOOKS**

W. E. Spahr and others, Economic Principles and Problems (Farar), chapter 2; W. H. Kickhofer, Economic Principles, Problems, and Policies (Appleton-Century), chapter 4, C. G. Chenoweth, An Introduction to Economics (Holt), chapter 5; and G. M. Modlin and F. T. de Vyver, Development of Economic Society (Lattle, Brown). See also the Cambridge Medieval History, the Cambridge Modern History (Macmillan), and the Cambridge Economic History of Europe (Macmillan) of which one volume has been issued at this writing.

## THE ENCYCLOPAEDIA OF THE SOCIAL SCIENCES

Main articles. Feudalism; Capitalism; Industrial Revolution; Nationalism; Commerce; and Introduction I, sections IV—XI. Subsidiary articles: Manerial System; Contract; Guilds; Just Price; Status; Class; Serfdom; Usury; Fairs; Piracy; Enclosures; Protestantism; Acquisition; Fugger Family; Mercantilism; Imperialism; Colonial Economic Policy; Individualism; Liberalism; Factory System; Putting Out System; Industrialism, Economic Policy.

## The Story of American Life

detailed study of the process analyzed in the preceding chapter. It is, of course, an offshoot of the commercial and industrial revolutions. The upsurge of discovery and colonization which led to the beginnings of our nation was an integral part of the great revival of trade. The thousands who througed to our shores made this choice because of conditions in the lands of Europe. Some sought religious freedom. Others were missionaries, striving to bring the message of salvation to the savage. Many left because of the wretchedness and misery which were already the lot of thousands, even before the industrial revolution. There were those who came against their will, as deported criminals or victims of the traffic in slaves. In no sense was America free from the influence of the imperial powers of Europe. England, Spain, Holland, and France all had their vital interests in this land of mystery and hope.

Yet, even from the beginning America was to transcend its origins. There was something in the vastness and promise of the country which was slowly to transform this motley group of immigrants into the pioneers who opened the unlimited resources of a bountiful continent. America had much to give. The East, with its rivers and harbors, with the fertile lands of New Jersey and New York, with its resources in timber and iron, was a challenge to the hardy settler. The South offered broad plantations for cotton and tobacco, and great forests for naval stores. Later, the almost unending plains of the West were to beckon to adventurous souls who longed for freedom and independence. At first, the forests meant furs and wild game. After colonial days, they were the source of timber which we used with such prodigal abandon. Thus the panorama unfolded, as streams of immigrants came to seek sanctuary and opportunity, and the boundaries of the new republic expanded even to the shores of the Pacific.

With the growth of the nation and the expansion of industry and commerce, ever-new treasures were discovered. Beneath the soil were found huge deposits of coal and iron. Copper, zinc, bauxite, and oil

were made available for the insatiable appetites of industry. The soil of the plains was broken by the plow and, for a while, nature conspired to furnish the climate for record crops. Gold was found in California. Off the shores were fisheries which furnished abundant food. Cattle and sheep grazed on the pastures and plains. All this was bound to leave its impress upon the spirit of America. Hardship and suffering were also present in abundance. Depressions exacted their inexorable toll. But hope and opportunity were never destroyed. Always there was a vision which, for better or for worse, gave America a distinct and unique character.

### A NATION IS BORN: 1492-1814

The beginnings were crude and primitive. Some of the soil, as in New England, gave meager and unrewarding crops. Inland transportation, apart from the great rivers, was difficult. Until the road and canal building era after the War of 1812, the Appalachian Mountains effectively separated the East from the Middle West, which had its natural outlet through the Mississippi River and New Orleans. As a result, the early colonists were primarily an agricultural people. In the North, corn, wheat, peas, beans, and other grains and vegetables brought from Europe or gotten from the Indians were produced primarily for home consumption. In the South, tobacco and indigo were raised for export. Later, cotton was to be the great southern crop. The export of these crops from the South, and naval stores, hunber, furs, and iron from the North, gave impetus to colonial commerce. In return the colonies received finished woolens and iron products from England. Some commerce also was carried on with the West Indies and southern Europe, but England placed serious restrictions upon this multilateral trade.

English policy towards the colonies was mercantilist. They were expected to export raw materials and import finished products. Even in the field of raw products they were not allowed to compete with the mother country, so that fish, grain, and rum could not be shipped either to England or to any of her principal markets. In the case of other products, such as sugar, tobacco, cotton, naval stores, and fins, England was supposed to be the exclusive market. The colonies were discouraged from developing native industry. They likewise were prohibited from issuing their own currency. These restrictions at first were not considered too severe, since they were not always rigidly enforced. Most Americans preferred agriculture, and smuggling was common enough to make the regulations less than onerous.

In themselves, the Navigation Acts of 1651 and 1660 were severe. They practically monopolized both exports and imports. But until 1765 they were easily evaded. After that date, England decided upon rigid enforcement. In addition, taxes and duties were levied in the attempt to meet the expenses of the Seven Years' War, just concluded. So that these new exactions would not be evaded, British naval officers were to enforce the customs and British soldiers were quartered upon the populace. Writs of assistance permitted search and seizure of smuggled goods. As a final burden, the East India Company was given the right to sell tea directly to the colonists at prices which would have runed importers and middlemen who formerly bought at the English auctions. This gesture, minor in itself, brought to the colonists the vision of arbitrary English control over any or all phases of their economic life. Public indignation, which before had sanctioned boyeotts and embargoes and forced the mother country into strategic retreat, now flared into open rebellion. Force was met with force, and the War for Independence had begun.

The war was a bitter and trying period. Its military hardships are known to every high school student, but coonomic handships were at first equally severe. England blockaded the coast in an attempt to ruin the economic life of the colonies. Yet, the initial hardships tuned out to be blessings. The closing of English markets stimulated the growth of cotton and the production of wool for other European markets. The foreigners who came to help the colonists brought new and improved agricultural techniques. Manufacture was of necessity improvised both for the needs of war and for the civilian economy. Even commerce increased, since Spain, Holland, and France evaded the blockade and welcomed the opportunity to trade with the colonies. Privateering was a lucrative business, with almost as many Americans involved as were serving in the army. American shipbuilding, which had been developed to evade the Navigation Acts, was carried on although in a somewhat restricted fashion. Once again the resourceful pioneers had made virtue of necessity.

When the war had ended in victory, the colonies were ready to become a nation. The first attempt, the Articles of Confederation, did not provide the government with the full attributes of sovereignty. It did not have the power to raise taxes and without this resource its other powers tended to be nominal. Because of the lack of internal unity, the new nation had difficulty negotiating treaties abroad. At home financial chaos set in, with the states issuing their own paper money and debt-ridden farmers revolting under Daniel Shays in 1786. The result was a demand for a stronger central government, a demand

largely supported by the propertied classes who feared the economic policies of the farmers. Shipowners and manufacturers wanted protection by means of a strong national power. Merchants wanted interstate commerce barriers removed and a stable currency available. Creditors of the Continental Congress felt that a real sovereign state would increase the value of their claims, while land speculators east a covetous eye on Western land which they felt would be opened by the new government. These groups were heavily represented at the Constitutional Convention. Naturally the document finally drawn up bolstered the rights of property and set up obstacles to any quick changes as a result of popular sentiment. Indeed, the great human rights of which we boast were not guaranteed until the first Congress submitted the ten amendments known as the Bill of Rights.

The struggle between the propertied and the lower classes did not end with the adoption of the Constitution. The first Secretary of the Treasury, Alexander Hamilton, represented the former group. Hamilton advised that the Congress guarantee state debts, levy an excise tax in addition to tariffs for revenue, and establish a national bank. The United States Bank brought order to the financial system of the nation. It aided greatly in a new wave of prosperity occasioned when England's war with France opened new markets to American business and agriculture. Even though the bank was successful, however, the suspicions harbored by the Jeffersonian elements prevented the renewal of its charter when it expired in 1811. Distress followed, accentuated by the largely unsuccessful War of 1812, which had been instigated more by the restless elements of the West and South than by the shipowners whose cargoes were stopped by the helligerents. As a result of the distress, a second successful bank was chartered in 1816, but this was likewise to die because the suspicious [ackson, 10presenting agrarian groups, felt that it was the agent of Eastern capitalists. An artificial panic, created in 1831 by deliberate credit contraction in order to frighten the enemics of the bank, strengthened this suspicion and made its rejection a certainty. An orgy of speculation followed in 1837, only to result in a severe panic. This was accentuated by the delayed results of a crop failure in 1835, which left farmers unable to pay their debts and upset our balance of trade, leading to a withdrawal of specie from the country. This panic was but one of many to stem from overoptimistic expansion, speculation in the government lands of the West, and the resultant contracting of unpayable debts. Each depression tended to strengthen the trend towards agrarian revolt, just as the prosperity intervals bolstered the conservative business and financial elements. The "Square Deal" of Theodore

Roosevelt, the "New Freedom" of Woodrow Wilson, and the "New Deal" of Franklin Roosevelt were but recurring themes in a pattern which is as old as the republic.<sup>1</sup>

## THE CONQUEST OF A CONTINENT: 1811-1860

When the War of 1812 had concluded, the United States had achieved an improved status among the nations of the world. Although militarily the contest was a stalemate at best, yet the damage inflicted by our privateers was sufficient to make European powers more cautious in regard to the young republic and its rights. While the Western farmers, who were the most powerful faction in demanding war, did not succeed in their objective of driving England from Canada, yet they did remove its influence in the West. This achievement, coupled with the Louisiana Purchase of 1803, definitely opened the West for unrestricted colonization and commerce. Only the Indians remained as an obstacle and, without British support, they were unable to stem the advances of the frontiersmen. The great migrations had begun.

The Lands of the West. The peace negotiations which followed the War for Independence gave to the Colonies great tracts of land west of the Alleghenies. At first they were of limited usefulness, since their natural outlet, the Mississippi, flowed through Spanish Louisiana. Napoleon acquired Louisiana in 1800, hoping to restore France's empire in the New World, but after the revolt in Santo Domingo he became less sure of his ability to penetrate the Western hemisphere. Ile sold Louisiana to the United States in 1803. The pioneer was now free to follow the explorer and the missionary to the lands of the West.

Among the first to move were southern planters, seeking richer fields for cotton. The inventions of the Industrial Revolution seemed to open an unlimited market for this staple, and the tidewater lands were considered inadequate for the demand. Great wagon trains debouched upon the Missouri and lower Mississippi valleys. A similar movement was to take place in the regions of the Ohio and the upper Mississippi. Immigrants from Europe, those discontented by the depression in the East (occasioned by our embargo against England during the Napoleonic wars), and many fleeing religious and political discrimination in New England flocked to the freedom of the West.

<sup>&</sup>lt;sup>1</sup> For readings on this period, see H. U. Faulknor, American Economic History (Harper), chs. 1-9; C. W. Wright, Economic History of the United States (McGraw-Hill), chs. 1-15; C. A and M. R. Beard, The Rise of American Civilization (Macmillan), chs. 8-8; C. A Beard, An Economic Interpretation of the Constitution of the United States (Macmillan); and S. E. Morison and H. S. Commager, The Growth of the American Republic (Oxford).

Later, the lure of the fur trade and of fertile lands was to result in the colonization of the Oregon Country, which as early as 1811 had been a base for the Astor fur operations. American penetrations into the Southwest were to result in the secession of Texas from Mexico and our War of 1846–1848 with that nation. After this war, we had California and all but a minor part of the present Southwest. The discovery of gold in California intensified the movement west, as hopeful prospectors sailed around Cape Hom or plodded wearily along tenuous transcontinental trails in search of fabulous wealth.

The movement to the West was accompanied by land speculation of unprecedented scope. The early Land Ordinances provided for the sale of public land at auction in great lots, ranging from a township of thirty-six square miles to smaller sections of one square mile (640 acres). Various minimum prices from one to two dollars an acre were set, with the result that prospective pioneers could not hope to raise the relatively huge sums needed. Even though the size of the section and its price were subsequently decreased, most of the lands still went to speculators. Settlers who had already moved into the land and cultivated it were dispossessed, often by federal troops, as a result of the auctions. It was not until the Pre-emption Act of 1841, which gave such settlers the right to purchase at minimum rates, and the Homestead Act of 1862, which gave the land free to those who actually cultivated it, that agrarian discontent was partially allayed. Before this, farmers were heavily in debt and suffered intensely when periodic panics swept the country and left them in penury. Furthermore, the speculative aspect of land encouraged wasteful and casual farming by those who did not intend to remain. They merely sold at a profit as new settlers arrived and moved on with the ever-receding frontier.

The political implications of these developments were manifold. It was noted earlier that the farming group distrusted the industrial East and its banking policies. Because of its heavy burden of debt, the farming group opposed sound monetary policies and multiplied note-issuing state banks. The only result was an increase in the orgy of speculation and a consequent intensification of the ensuing panics. Another plachomenon of the period was the corruption of American politics, as venal groups sought special land grants from the federal and state governments. This strain on the structure of government was intensified by the sectionalism arising because of divergent economic interests of West and South on the one hand, and the East on the other. New England was almost ready to second from the Union because of the unwanted War of 1812. Later the South did second, precipitating the fratricidal War Between the States

A great factor in the migrations to the West was the development of an adequate transportation system. Although America was blessed with great rivers, most of these streams flowed north and south, while the movement of population was east and west. Thus, at first it was virtually impossible to move the grain crops beyond the mountains in exchange for the manufactured goods of the East. Soon, however, three major channels of trade were opened. Shortly after the Revolution the value of all-weather toll turnpikes was recognized. Soon most of the cities of the land were connected by hard-surfaced roads of durable construction. Outstanding in this regard was the 834 miles of the National Pike which ran from Baltimore to Vandalia, Illinois. At the same time, waterways were not neglected. The invention of the steamboat made heavy river traffic a possibility, while an interlacing network of canals supplemented the work of nature. The most noteworthy achievement in canal building was the Eric Canal (1825), which connected New York with the West, insuring to that metropolis its position of pre-eminence as a port. Finally, the successful development of the steam railroad after 1830 revolutionized transport. A veritable mania of railroad building was to sweep the country. By 1860 every important city in the East and South could be reached by rail from the Mississippi valley.

Concomitant with the growth in transport was an increase in speculation, already noted in connection with land. In each of the three great channels of trade—turnpikes, canals, and railroads—imagination tended to outstrip reality. The resultant construction of high-cost uneconomical routes was to lead to inevitable deflation and bankruptcy. Given the extent of the boom, the consequent recession was bound to have widespread and serious consequences. Repudiation of debt, even by the states of the Union, was not uncommon. Europeans, with any knowledge of their investments in the enterprises of this period, must have smiled ironically at our tirades against debt repudiation during the Nineteen Thirties. But Americans suffered also, as the panies of 1819, 1837, and 1857 brought ruin throughout the land. Moreover, the corruption and blackmail incident to the seeking of government grants to the promoters did little to bolster confidence in the integrity of our public officials.

Extension of transportation in the new lands made commercial agriculture practical. In the South and Southwest, cotton was king. The invention of the cotton gin permitted plantation owners to supply the enormous demands of American and English factories alike. With the expansion of the cotton market, the demand for steady and cheap labor entrenched the system of slavery in the South. In addition to

cotton, such products as tobacco, sugar, rice, and hemp became important exports of the Southland. Inevitably this region was drawn into the one-crop export economy which was to reduce her to economic vassalage. High immediate profits blinded planters to this danger, and luxurious standards of living prevented the accumulation of capital. As a result, the South, like the West, was in debt bondage to the North, with the inevitable accumulation of bitterness which this state produces.

The West at first specialized in the raising of livestock. Cereal grains could not be easily transported before the advent of canals and tailroads, except in the form of meat, whisky, and similar concentrated products. Hogs and cattle could be driven to the market, or meat could be preserved by smoking or salting. But with the increase in transportation facilities, corn, wheat, and other cereals could be sent directly to the East and South. Western competition then forced New England to abandon this type of farming and to turn to vegetable and dairy products. Once the metal plow was invented to break the soil of the plains, and mowing, reaping, and threshing machines gathered in the abundant crops, America became one of the great food-producing nations of the world. Since this development coincided with the repeal of the English Corn Laws (1846), which had embargoed England's importation of foreign grains, an export as well as a domestic market became available for our cereal crops. This development turned the attention of the West towards the markets and ports of the East, thus breaking the West's alliance with the South, an alliance which enabled the debtor groups to exercise political control over the East. In desperation, the South broke from the Union.

The East Also Prospers. It was to be expected that the growth of the West was to have its impact upon the East. In general, the East was opposed to the opening of Western lands, since it drew labor and capital from Eastern commerce and industry. Yet, the waves of European immigrants supplied abundant labor, and capital, while not plentiful, was never seriously lacking. Furthermore, as the West grew and prospered it furnished markets for the manufactures of the East. Even though it drew funds away, it repaid them with enormous profits. In this land of opportunity, there was enough for all. One could grow rich, without another becoming poorer. Such, at least, was the picture between the War of 1812 and the struggle of 1861–1865.

After the War of 1812, commerce was resumed with Europe on the basis of reciprocity. Treaties were signed with Great Britain, France, Prussia, and many other nations, opening their ports for mutual trade. As a result, American shipbuilding and commerce prospered. One

daring innovation was the packet ship, which sailed regular routes on schedule, instead of waiting for cargoes and sailing accordingly. Such excellent service naturally stimulated trade. Another American contribution was the clipper, a fast sailing vessel used primarily for the great distances of the California and Far Eastern trade. Whaling and fishing also produced a demand for ships. It was only when England, with its more highly developed metallurgical industry, outstripped us in the building of iron and steel steamships that America lost its pre-eminence in shipping. During this period we imported textiles, metals, earthenware, and wines from Europe; molasses, sugar, rum, and coffee from the West Indies and South America; and tea, silks, china, and spices from the Orient. Most of our exports consisted of Southern cotton, rice, tobacco, and sugar, with cereals, wool, furs, and naval stores from the North and West rounding out the balance.

The growth in commerce was paralleled by growth in manufacturing. For a long period, manufacturing had been a secondary consideration to investors. Land and transport offered more lucrative outlets. Furthermore, the chaotic banking and currency system interfered with long-term planning. A government dominated by Southern and Western planters was not interested in the protective tariff or other encouragments to industry. Yet, the resourcefulness of the industrialist gradually overcame these obstacles. First the textile industry prospered, after a strong start when English imports were cut off during the War of 1812. Foundries turned out metal stoves and machine shops produced textile equipment. Meat processing became more and more a matter of large-scale enterprise. Boots and shoes, ready-made clothing, woolen and worsted goods, and leather were other typical products, most of them made in the states of the Northcast. Here skilled labor enjoyed a fairly good living, aided by the first trade union movements, which had some strength from 1825 on. Unskilled labor had a harder lot, but exploitation never reached the depths which it attained in England. While conditions seem harsh when compared to modern standards, and there were revolting abuses of child labor and pauperism in the cities, the real hardships resulted from periodic crises which threw thousands out of work. Even here, however, the availability of free land tended to lessen these burdens and make more bearable the lot of the worker.

It may seem presumptuous for the present generation to cavil at nineteenth-century panics, since even today economists disagree concerning the causes of depressions and confess their impotence to prevent them. Yet, there were two recurring features in these panics which ultimately led to reform. The first was the mania for speculation which characterized the land and transportation policies of the period. This trend was to persist, with tragic consequences, throughout the century and into the next, when the Securities Acts of 1933 and 1934 removed many of the abuses. The second feature was the subordination of the banking and monetary system to these speculative operations. To accomplish this objective, many state banks were careless in their issuance of notes and in their investment in risky securities. The proposed reniedy was further aggravation of the situation through monetary inflation (the silver controversy) rather than restriction of speculation through more centralized banking control and more conservative management. Real reform was to await the Federal Reservo Act of 1913 and the Banking Acts of 1933 and 1935.

Throughout the period, accordingly, there was great growth, but also an increase in internal stresses and strains. Ultimately these tensions were to threaten the stability of the Union. The plantation economy of the South and the industrial capitalism of the North were moving towards armed conflict. The South wanted a low tariff; the North demanded protection; the South sought land expansion to the West, aided by easy money and banking laws; the North wished to retain its population and to have a sound and conservative banking system. For a while a balance had been struck. Northern economic power was countered by Southern political power, gained through an alliance with the West. But when transport linked West and East, and when these sections joined on a policy of high tariffs and free land, their mutual concessions proved too much for the South. It had now lost its political power and seemed destined to be a colonial appendage to the North. Jefferson Davis openly charged that the Homestead Act was a move to "gain a majority in the Congress of the United States and convert the government into an engine of northern aggrandisement . . . that your section may grow in power and prosperity upon treasures unjustly taken from the South . . . you want, by an unjust system of legislation, to promote the industry of the New England states, at the expense of the people of the South and their industry." The South now depended upon the North for manufactures, transport, and finance. With political dependence in the offing, secession appeared to be the only remedy. Sccession was decreed, and the War Between the States was declared.3

<sup>&</sup>lt;sup>2</sup> Cf. C. A. and M. R. Beard, op. cit., Vol. II, pp. 5-6.

<sup>3</sup> For readings on thus period, see H. U. Faulkner, op. cit., chs. 10-17; C. W. Wright, op. cit., chs. 16-28, C A. and M. R. Beard, op. cit., chs. 9-18; G. Myers, History of the Great American Fortunes (Modern Library), Parts I and II; F J. Turner, The Fronticr in American History (Holt), P. W. Bidwell and J. I. Fal-

## A GIANT AMONG NATIONS: 1860-1945

The war between brothers followed the economic pattern of all wars. Industrial production was stimulated, especially the manufacture of woolen cloth for uniforms and machinery for implements of war. Farmers, taking advantage of the opportunity provided by the Homestead Act of 1862 and of the needs of the nation, expanded their output enormously. Railroad building increased apace. The cost of living 10se, as the government resorted to inflationary expansion of currency to meet the expenses of war. Only the South suffered, although even here some commerce was carried through the blockade. When the struggle ended, the South was impoverished and bankrupt. The North and West were on the eve of momentous growth.

Vicissitudes of American Agriculture. After the war, the sparsely-settled states of the nation were rapidly populated. The recurring waves of immigration from Europe, added to favorable land laws, led to a substantial increase of population in the Far West. Colonado, Idaho, Montana, Nevada, and Arizona were opened up by prospectors during the Sixties. Next came the era of the ranchers in Kansas, Nebraska, and other states on the open plans. Finally, the farmers, encouraged by federal land policies and the coming of the transcontinental railways, encroached upon the ranchers and broke the soil of the plains. Two technical developments made this expansion possible, namely, the manufacture of cheap windmills to draw water, and the invention of barbed wire for fences, which made enclosure possible in a region where there was neither timber nor stones for the more traditional type of fencing. By 1890 the frontier had largely vanished, and agricultural growth was more often intensive than extensive.

coner, History of Agriculture in the Northern United States, 1620–1860 (Carnegue Institution), L. C. Gray, History of Agriculture in the Southern United States to 1860 (Carnegue Institution), V. S. Clark, History of Manufactures in the United States, 1607–1860 (McGraw-Hill), E. R. Johnson and others, History of Domestic and Foreign Commerce in the United States (Carnegie Institution); B. H. Meyer and C. E. MacGill, History of Transportation in the United States Refere 1860 (Carnegie Institution); J. R. Commons and others, History of Labor in the United States (Macmillan), Vol. I, and W. J. Shultz and M. R. Caine, Financial Development of the United States (Prentice-Hall)

<sup>4</sup> In this section, the need for brevity compels the use of occasional semitecluncal terms, such as "inflation," "flat money," and others, and also mere allusions to important laws which were passed during the period. Such terms, and any laws which have substantial current influence upon economic life, are explained fully in relevant chapters. Students wishing explanations at this time should consult the appropriate chapters and index references

An important element in intensive exploitation of land was the further incehanization of farming. Harvesting machines were improved, and superior plows, harrows, and cultivators permitted planting to keep pace with the possibilities of harvesting. The horse as a source of motive power was supplanted by the gasoline motor. Scientific breeding, planting, and husbandry improved the quality of farm products, with both federal and state governments subsidizing research and experimentation. Land grants were given so as to turnish finances for state agricultural schools. Irrigation and reclamation added to the acreage of available improved land. In the course of these developments, the center of cereal production remained the Middle West, while the South concentrated upon cotton and tobacco. Wisconsin and Minnesota led in dairy products, Maine and Idaho became famous for potatoes, Connecticut produced onions and tobacco, and the Middle Atlantic states favored vegetables and berries, while the Far West marketed over half the nation's fruit. The Southwest became an important producer of cotton and the Mountain States cultivated sugar beets.

From the description of the great forward strides of farm production, one might imagine that the farmer had entered upon an era of uninterrupted prosperity. In fact, the contrary was more nearly the truth. Except for the first two decades of the present century, the farmer has been in almost continual distress. In his complaints there run many recurring themes: debt, exploitation by middlemen, fluctuating markets and uncertain prices, and, by contrast, the definite certainty that manufactured goods purchased by him will be expensive. As the Farmer's Alliance put it in August, 1890: "There are three great crops raised in Nebraska, one is a crop of corn, one a crop of freight rates, and one a crop of interest. One is produced by the farmers who by sweat and toil farm the land. The other two are produced by men who sit in their offices and behind their bank counters and farm the farmers."

In spite of the Homestead Act, the farmer went into debt to obtain his land. He found that corporations, through dummy agents, had pre-empted the most valuable tracts. He had to buy at their prices. Further, when he borrowed to expand production during the War Between the States, he had to pay high, inflationary prices. After the war, the policy of government was to contract the supply of greenbacks and to reduce prices. But debt did not go down as prices declined. The same story was repeated, with minor variations, during the First World War. In each case the farmer expanded production to record heights, only to have the abnormal demand contract when peace was restored. When this contraction was superimposed upon

a decline in exports due to competition from the Argentine and the Orient and to European nationalism after the War of 1914, he was in grave distress. As a final affliction, he found that an imperfect banking system forced him to pay high interest rates and to bear the brunt of speculative panies which periodically swept the nation.

Agriculture was also exploited by middlemen. Unconomic railroads, with their stock watered by the financial chicanery to be described presently, tried to recoup their losses by discriminatory freight rates. Food dealers and processors, speculators on the grain and cotton exchanges, and operators of elevators, meat packing houses, flour mills, and the like were successful in buying cheaply and selling dearly. In the meantime, tariffs protected monopoly profits and high prices in industry, with the farmer forced to buy at inflated prices, while selling his goods at competitive prices.

The only recourse left to the farmer was political. He organized the Granger movement, so-called from the "Granges" or local lodges of the Patrons of Husbandry, a national rural organization. The Greenback and the Populist parties were expressions of his demands for reform. Their attack was primarily against the problem of debt and their solution was currency inflation, either through the printing of more greenbacks (flat money) or through the unlimited coinage of silver at a ratio whereby sixteen ounces of silver would be equivalent to one of gold. In addition, they attacked the abuses of the railroad and industrial monopolies. While these movements were unsuccessful in achieving their financial program, they did much to initiate state and federal reform legislation for industry and the railroads. Even their money agitation bore fruit, since it led to successive government efforts to alleviate farm credit problems.

Among the government aids to the farmer were the Federal Reserve System (1913), founded for many reasons but, in part, to provide better credit facilities for the rural regions; the Federal Farm Loan Act of 1916, which established Federal Land banks for long-term loans and mortgages; and the Agricultural Credit Act of 1923, which aimed to furnish short-term credit by establishing banks to discount such notes. These credit agencies were consolidated under the Farm Credit Act of 1933, and supplemented in the following years by laws aiding in refinancing farm debts and repurchasing land after foreclosure. Other legislation aided by increasing tariffs on farm products (1922 and 1930) and by facilitating marketing (Agricultural Marketing Act of 1929). This latter enactment encouraged loans to farm co-operatives. A more direct attack on the farmers' problems was the attempt to restrict production to the level of demand by the Agricultural Adjust-

ment Acts of 1933 and 1938. The result of these laws was a definite improvement in farm income. With his economic status assured, the American farmer contributed nobly to the Second World War by eclipsing previous production records, although handicapped by labor and machinery shortages.

Revolution in Transport. After the War Between the States the nation entered into an era of railroad building. The first transcontinental road, the Union Pacific, was completed in 1869, to be followed by the Northern Pacific and the Great Northern. By the middle Eightics all the spans across the country had been constructed and the great trunk lines to Chicago were in operation. With the passage of time, improvements were made in the operation of the roads. Steel rails and bridges replaced iron; service was improved by Diesel and electric engines and by the addition of sleeping cars for passengers and refrigerator cars for food. Standard-gauge tracks led to uniformity, while air brakes and other devices contributed to safety. The ultimate development to date is the air-conditioned, streamlined, all-room train, which promises much in speed, privacy, and comfort. In the meantime, because of abuses which will be described subsequently, government regulation through the Interstate Commerce Commission (1887), the Hepburn Act (1906), the Mann-Elkins Act (1910), and the Transportation Acts of 1920 and 1940 put some order and justice into chaotic rate structures. A similar result was forthcoming from the consolidation movement which started during the Eighties in the attempt to cut down unrestrained competition. By 1906 most of the railroads were in the hands of seven great systems dominated by investment banking houses.

For shorter hauls the electric railway has been favored since it was inaugurated in Kansas City in 1884. Without such internal transport, great cities could hardly have existed. More revolutionary in its effect, however, was the automobile, which was used in earnest after 1905. When Ford produced the famous Model T, the automobile became a commonplace. In its turn it led to the extensive roadbuilding which characterized the Twenties. The social effects of this invention are incalculable, since it broke the last barriers of isolation between different regions of the country. An even heavier blow to isolation was dealt by the airplane. Since 1919 it has been in commercial use, and the military developments of the Second World War have so perfected it that great postwar expansion can be expected. In the meantime, slower methods of transportation have not been neglected. Inland waterways are being constantly improved, and a Chicago-to-the-sea waterway by way of the St. Lawrence is the subject of much discussion. General federal control of all transportation was achieved by the Motor

Carrier Act of 1985, the establishment of a Civil Aeronautics Administration in the Department of Commerce (1940), and the extension of ICC authority to inland and coastal water carriers by the Transportation Act of 1940.

It has been asserted that our progress in transportation had a profound effect upon our victory in the Second World War. This was was above all a war of fast mechanical movement, and our automotive genius was in large measure responsible for outstanding military achievements. At home our transportation system worked marvels in spite of enormous handicaps. Particularly notable was the achievement of the railroads, which carried abnormal quantities of freight and passengers in spite of a depression-caused shortage of equipment. In contrast to the First World War, the railroads were not taken over by the government, although the Office of Defense Transportation enforced co-ordination and control. Equally noteworthy was the record of truck and passenger automobile transportation, this in spite of a rubber shortage occasioned by the Japanese seizure of Malaya and the Netherlands Indies. War goods moved on time and in adequate quantity, supplying battlefronts more extensive than history has ever known before. Communications likewise developed during the period, as the telephone, telegraph, and radio became commonplace. Of outstanding military value were radar detection instruments and frequency modulation (staticless) and directionally beamed radio.

The Growth of Commerce. In 1858 the Great Atlantic and Pacific Tea Company was founded, Woolworth Stores started in 1879, and Montgomery Ward & Company was begun in 1872. These developments were symptoms of and preludes to the great change which was to come over American commerce during the late nineteenth and early twentieth centuries. Distribution on a mass scale, fostered by expensive advertising campaigns, provided a new stimulus to commerce. The marketing of standard, attractively packaged products was a pleasing and successful innovation. From the consumer viewpoint, purchasing was made easier by the widespread use of the instalment sale technique, particularly during the Twenties. On the seamy side of the pieture, there was considerable deception and adulteration macticed. Shocking revelations of unsanitary practices, dramatized by Upton Sinclair's The Jungle, jolted the nation into enacting the Pure Food and Drug Act of 1906. In turn, glaring loopholes in this law were closed to a considerable degree by the Food, Drug, and Cosmetic Act of 1938.

While internal commerce was expanding, foreign trade multiplied twenty times over its 1860 level. The tremendous growth of industry led us to seek foreign markets, advances in the technique of water

transportation and in communications by cable (1866) and radio (1903) facilitated the movement of goods; while improved banking and credit facilities aided materially in the financial aspects of trade. The Department of Commerce (1903, 1913) developed extensive programs for aiding navigation and commerce. Indirect subsidies for shipbuilding in 1920 and 1928, and direct subsidies in the 1936 act creating the United States Maritime Commission, led to increased shipbuilding. During the Second World War, American shipbuilding reached the staggering total of twenty milhon tons a year of commercial vessels. The majority of these ships were the slow and relatively inefficient Liberty ships, later to be replaced by the faster, turbine-propelled Victory ships, but many first-class cargo vessels were produced. At the close of the war, a great surplus of ships is expected. American merchant marine could once again have the ascendancy which it possessed in the days of clippers and packets.

With the passing of time, America has been exporting relatively less food and raw materials and relatively more manufactured and semimanufactured goods. As industry reached its highly developed state and domestic population increased, crude materials could be used on the home market and even imported, while our automobiles, typewriters, and other machinery were extensively adopted. A factor in this trend was the gradual increase of tariffs, which during the period following 1860 became primarily an instrument of protective policy rather than a source of revenue. Hardly a tariff act was enacted since that time which did not raise rates. Outstanding were the Me-Kinley Bill of 1890, the Fordney-McCumber tariff of 1922, and the Hawley-Smoot Act of 1930, the latter passed in spite of the protests of one thousand American economists. The tariff had become a political issue, with Republicans favoring protectionism and Democrats contributing what few reductions there were during the period. A reversal of trend occurred in 1934, after the 1930 tariff was blamed for intensifying the depression. With the passage of the Trade Agreements Act (1934), reciprocal trade agreements were signed with nearly thirty nations, whereby unitual tariff reductions were accepted. The policies of President Truman indicate that strong efforts will be made to continue the program as a permanent element in American trade policy. Indeed, the 1945 extension of this Act gave the President even more liberal powers to reduce tariffs.

An interesting sidelight of our trade policy was the American excursion into *imperialism*, in pursuit of our "maintest destiny." In the effort to seeme markets and raw materials, investments were made in Cuba, China, South America, and other nonindustrial regions. The

Spanish-American War in 1898 was fomented by irresponsible journalists and a small group of imperialists, including the future president Theodore Roosevelt. The conclusion of the war left us with the Philippines, Puerto Rico, Guam, and a protectorate over Cuba. In order to build the Panama Canal, we recognized Panama's secession from Colombia and prevented that nation from crushing the revolt. In 1905 we took over customs collection in the Dominican Republic, in order to service its external debt. The First World War was our excuse for armed intervention in Haiti to "protect" it from German aggression and, incidentally, to safeguard the investments of American bankers. Our interests in military security called for frequent aimed intervention in Nicaragua and for the purchase in 1917 of the Danish Virgin Islands. In 1914 and 1917 our aimed forces entered Mexico to "pacify bandits." In regard to our possessions, our colonial policy has varied from excellent in the Philippines to only fair elsewhere. Generally the government secures improvements in education and sanitation, but American commercial interests exploit native labor.

The policy of American imperialism in Latin America was reversed by the Good Neighbor policy of President Roosevelt, expressed in the Montevideo Conference of 1933 and the Lima Conference of 1938. In regard to Europe and Asia, three neutrality acts culminating in the Act of 1937 led to a policy of virtual nonintercourse with belligerents in the effort to avoid inflammatory incidents. In 1941, however, the feeling that Axis victories and their "fifth-column" activities in the Americas threatened national security led to the adoption of the Lend-Lease program. Trade carried out under this act, and the hardening of our policy towards the 1937 Japanese invasion of China, led to the Pearl Harbor attack in 1941 and plunged the United States into the Second World War. This was ended in 1945 with the unconditional surrender of Germany and later of Japan.

Industry Reigns. The growth of American industry has been continuous and phenomenal. It nearly doubled during the decade following 1860, great spurts forward were taken after 1880 and 1910, while expansion since 1940 has amazed the world. From products valued at one billion dollars in 1849, annual industrial output has increased to an average of sixty billion in peace-time years and far over one hundred billion during the Second World War. Even with allowance for increasing price levels, this growth is outstanding. In the early years, the processing of agricultural products was important, with flour, cotton, lumber, shoes and other leather products, wool, and liquor leading the list. By 1914, iron had moved from fifth to second place, and before the recent war, iron and steel were our first products.

Motor vehicles and related industries, electrical products, and printing and publishing are also leading peace-time products, with meat packing, bread and bakery goods, eigarettes, and cotton material the chief contributions from agricultural raw materials. Our unsurpassed natural resources, the great merease in population to furnish both labor and consumers, tremendous advances in industrial technology, and the abundance of enterprise and managerial skill all contribute to our pre-eminence. In use of power and resourcefulness of labor and industry, America is unique. Unquestionably, the major unlitary blunder of the Axis during the Second World War was the failure to evaluate correctly this industrial potential.

At first, industry in the United States centered about the Northeast, where both labor and capital were present in abundance. Improved transportation and the availability of raw materials later led to industrial concentrations in the Middle West. The Mountain States concentrated on metal smelting and refining and the Pacific States specialized in processing agricultural and lumber products. The Tennesseo Valley Authority symbolized the possibility of further industrializing the South. One effect of the Second World War was the increase in the physical decentralization of industry, while economic concentration was heightened.

During this general period, labor was attempting to match the economic power of industry. It was at this time that the first of the unions which survive today was founded. The railroad brotherhoods led the procession during the Sixties, when engineers and firemen were organized. By the end of the decade, no less than thirty-two national unions were endeavoring to combat the inequality and discrimination which followed the war. With hard times in the following decade, labor organization suffered severely. Only by means of a secret organization, the Noble Order of the Knights of Labor (1869), were unions able to survive. The Knights grew rapidly to an aggressive national union, organized on geographical rather than craft or industrial lines. They reached the zenith of power in 1886, when public reaction to their militant tactics, unsuccessful strikes, and internal weakness caused by factionalism and poor leadership led to their celipse.

The year of the decline of the Knights marks the formal organization of the American Federation of Labor, a conservative organization of craft and industrial unions, with the former predominating. Their outstanding leader was Samuel Compers, who lived to see his organization reach great strength and prestige during the First World War, only to lose it in the aggressive campaign by industry for the open shop and the "American plan" during the Twenties. Side by side with the con-

servative craft unionism of the A.F. of L. was the revolutionary industrial unionism of the Industrial Workers of the World. The I.W.W. was founded in 1905 by Eugene Debs, William Haywood, and other radicals. It was syndicalist and anarchist in its mentality and thus aroused great public opposition. During the war of 1914 it had less than a hundred thousand members, compared to the two million of the Federation, but its enthusiasm and techniques of violence and sabotage brought it into unfavorable prominence. Its opposition to that war cut into its strength, with the result that afterwards its members were largely absorbed into the Communist Party, to follow the vagaries of the shifting party line.

During the Twenties labor waged a bitter and unsuccessful struggle against the organized might of capital. Conservative judges struck down reform legislation as unconstitutional and injunctions were issued freely to break strikes by forbidding picketing. Even the Sherman Antitrust Act of 1890, directed against business monopoly, had been used to strike down legitimate labor activities. In the meantime, the more ruthless employers resorted to intimidation, the blacklist, strikebreaking by gangsters, organized violence against striking workers, and other drastic means to keep down labor. Their more humane brothers promoted welfare schemes, such as stock sharing, profit sharing, and company unions, to accomplish the same result. Nevertheless, labor activity was successful in raising real wages in step with increased productivity during most of the period after 1860, cutting down the hours of work in industry from twelve or over to eight, passing compensation laws for industrial injuries, and protecting somewhat the labor of women and children. At the same time, the decline in immigration removed a potential source of competition.

Labor received a great opportunity to recover when the famous Section 7a of the National Industrial Recovery Act (1933) guaranteed the right to organize. This guarantee was considerably strengthened by the National Labor Relations Act (1935) which inaugurated a definite policy of protecting the right of workers to join unions. The result was a tremendous surge of organizing activity, spurred on by the United Mine Workers of the A.F. of L. and their president, John L. Lewis. Lewis formed a committee to organize mass production workers along industrial rather than craft lines. When the A.F. of L. gave only half-hearted support to this policy in its conventions of 1934 and 1935 and finally expelled the committee in 1936, a new organization was born, the militant, progressive Congress of Industrial Organizations (1938). Both the A.F. of L. and the C.I.O. continued to grow in spite of their internecine fights until by 1944 each had nearly seven million mem-

bers. During the Second World War, labor renounced its right to strike and received in turn from the War Labor Board, formed to handle all waitine labor disputes, a "maintenance of membership" clause. This clause, which bound union members to retain membership for the duration of the existing contract, protected the unions from several bitter assaults based on alleged interference with production because of strikes, absenteers, and the forty-hour week. Impartial observers left that these attacks were ill-advised, and that the record of both industry and labor during the war was substantially beyond reproach.

As a result of strong union pressure, several laws to help labor were passed during the Thirties. Among these were the Fair Labor Standards Act (1938), which set minimum wages, established overtime for hours worked in excess of forty, and prohibited most types of child labor. The Social Security Act (1935, 1939) established unemployment insurance, old age retirement funds, and an extension of public health service. Then the Walsh-Healey Public Contracts Act (1936) enforced prevailing wages upon industries seeking most public contracts, thereby eliminating many regional wage differentials. Finally, the National Employment Service Act (1933) promoted national facilities for employment service. Under this act, federal-state employment offices were widely organized. During the Second World War the United States Employment Service, founded under this act, together with the War Manpower Commission controlled the conditions of waiting employment. These emergency regulations were well accepted, but much bitterness developed over War Labor Board stabilization of wages unaccompanied by an equally successful control over prices. In the attempt to acquire political pressure equal to that of farm and industry, labor in 1944 abandoned its traditional policy of neutrality between presidential candidates. The C.I.O. formed a Political Action Committee to support the re-election of President Roosevelt, while many leaders of the A.F. of L. gave similar support, although its executive council refused to take a stand. The success of this policy apparently safeguarded labor's political gains for an additional four years.

High Finance. The growth of American business was largely made possible by the financial device of the corporation. The corporation, as will be explained later, is an instrument whereby large sums of money can be gathered, far more than could be raised even by wealthy men. By its use, the means were acquired to finance the great mass production factories and the other large-scale enterprises which characterize modern American economic life. It was not until after 1860

that the corporation was commonly used here for industry. Before then it was reserved for railroads, turnpikes, and other semipublic undertakings. The theory was that the immunities and privileges granted by law to the corporation were such that only limited use of this grant should be allowed. With business interests in the ascendant, however, and lucrative fees and taxes available from the issuance of corporate charters, states began to compete for the business. Laws became progressively more lax. New Jersey and other states permitted the formation of holding companies, or corporations organized to own stock in other firms and having no tangible assets of their own. Other devices allowed were the issuance of no-par stock, nonvoting stock, various types and classes of securities with unequal voting powers, the sale of stock options, and scores of similar privileges, many of which led to grave abuses.

The spirit of individualism which permeated the nineteenth century led to shocking excesses. Thus, some of the most valuable oil, timber, and mineral lands of the nation were obtained by the use of questionable means. Many were occupied under the federal land laws, through circumvention of regulations designed to protect genuine settlers. Others were granted by legislatures through bribery and blackmail. These were the tactics used by the railroad promoters to obtain grants of land and money. If venal politicians could not be found, then the threat of bypassing a region would be effective. It was said by a Congressman in 1873 that "The House of Representatives was like an auction room where more valuable considerations were disposed of under the speaker's hammer than in any other place on earth." 5 These were the decades of corruption which were to produce the "shame of the cities," the notorious gangs who preyed upon the body politic. While Boss Tweed ruled New York, seandals were unearthed with distressing regularity at the national capital, particularly during the administration of President Grant. The connection between the unsavory group of financiers, since called the "robber barons," and high public officials was often too close for complacency.

Among the worst victims of unscrupulous promoters were the railroads. Not only did the promoters obtain, often by devious means, huge government subsidies, but they were to exploit the very railroads which they built, often to the point of bankruptcy. In many cases there was unconscionable graft involved in the building of railroads, redounding to the advantage of their promoters, who conveniently owned the construction companies. Thus the Central Pacific cost \$58,000,000 but the construction company was paid \$120,000,000. Even more

<sup>&</sup>lt;sup>6</sup> M. Josephson, The Politicos (Harcourt), p 118.

scandalous was the building of the Union Pacific, through the Crédit Mobilier, where the trail of bubery reached as high as the Vice President. To "pious" Daniel Drew and Jay Gould, the railroads were but pawns in the game of stock speculation. Profits were produced, by borrowing if necessary, to raise stock prices when desired, or losses revealed when "bear" raiders sought to profit by "short" operations. Stock was issued without any increase in actual physical value, merely to fill the pockets of promoters.

When the barons fell out, then ruinous competition was resorted to. Even an incident of aimed waifare is recorded, when Jay Gould and Inn Fisk in the late Sixties attempted to seize the Albany and Susquehanna Railway, which served vital coal fields. First they tried to obtain the road by buying up its stock, but a clever young banker named J. Pierpont Morgan outwitted them. Next they attempted to take over the stockholders' meeting by violence, but again were outfought. Force was met with force, bube with bube, and duplicity with duplicity. Finally it developed that one group held the Albany terminal and another the Binghamton station. In desperation, the Albany group boarded a special train with several hundred armed men, to take over by force. But Could and Fisk also departed with their private army. The trains crashed head on, but the Albany group poured out and started battle. The Eric contingent was routed, and summoned the Pennsylvania National Guard to help. Next, another round of court battles started. Finally, the Governor of New York took over the road in the public interest and had the courts give a final decision. Such was the incident, more laid than fiction, which dramatized the struggles in which finance was supreme, and the public interest a forgotten trifle.

Another notable struggle was the fight for Erie between Vanderbilt and Drew, Fisk, and Gould. When Vanderbilt tried to gain control, the latter group issued millions of dollars' worth of new stock. Vanderbilt went to a friendly judge for an injunction, but Gould obtained a counterinjunction from his judge. Stock was printed with abandon and dumped on the market. Vanderbilt replied with a court order for the arrest of the Eric group, but Drew, Fisk, and Gould, after emptying their safe and cramming six millions into a valise, jumped into a carriage and dashed madly for the Jersey ferry. Some directors crossed the river in rowboats, although two were caught and clamped into jail. In friendly New Jersey, they threw armed guards about the Taylor hotel, whinsically renaming it "Fort Taylor." Fisk quipped that he was taking Horace Greeley's advice to go West. Hollywood would have rejected this scenario as implausible, but it was part and parcel of the

era of untamed individualism. Such illustrations tell better than any generalities the escapades which bankrupted railroads, wrecked the financial system through panicking the stock market, and plunged a whole nation into periodic chaos.

While the railroad and the stock market indulged in wild gyrations, a somewhat more orderly process of consolidation was occurring in industry. In the attempt first to reduce minous competition and then all competition, combinations were formed in almost every field. These took the form of pools, which apportioned production and sales; trusts. whereby stock was deposited with a board of trustees who ran the various properties in a unified and orderly manner; mergers, or the permanent welding together of separate firms; and holding companies, described earlier as corporations which control other firms through stock ownership. Most notorious among the mergers was the Standard Oil Company, which used unscrupulous and illegal methods to wipe out and absorb competitors. Among these methods were discriminatory price-cutting, the forcing of rebates on its products from the railroads, and even collecting rebates on competitors' shipments, the cultivating of legislators for special favors, and other ruthless techniques which soon gave the Standard Oil absolute dominance. Similar tactics, even if not so extreme, marked the formation of other trusts. Monopoly was achieved in sugar, whisky, meat packing, steel, and other basic industries. Carnegie was accomplishing in steel what Rockefeller had wrought in oil.

More peaceful methods were to characterize the work of Morgan. His greatest triumph was the formation of the United States Steel Corporation, to dominate over this basic industry. In contrast to the buccancering methods of the previous century, his was the snavity of the practiced diplomat. With keen insight he realized that the nation would tolerate no longer the bold raids of Gould and Drew, or the ruthless consolidations of Rockefeller or Carnegie. At a fateful dinner on December 12, 1900, Schwab of steel and Morgan of finance met. Schwab outlined the larger view springing from the prospects of unity. Morgan was convinced. Negotiations were opened, and soon the aristocrat of finance had arranged the merger of outstanding competitors in steel into the giant subsequently known as "Big Steel," at a capitalization twice its actual value. It would be wrong to assume, however, that the era of peace meant the end of stock market manipulations and deals. Only a short time later Morgan and Harriman were to quarrel over control of the Northern Pacific and, in their struggle for stock, to precipitate a panic. Again, in the acquisition of control of the New Haven Railroad fantastic prices were paid in order to monopolize New

England transportation. Yet, compared to the promoters of the nineteenth century, the House of Morgan was a conservative and constructive influence.

During the Twenties, consolidation was again the fetish of the day. The outstanding examples were in public utilities, electric and railroad, although industry was not neglected. Daring and ambitious promoters gained control of enterprises worth hundreds of millions and even billions with a relative pittance as a starter. Through the holding company device the Van Sweringens built up the vast Chesapeake and Ohio system, Insull erected a fabulous empire in electric utilities, while Mitchell presided over the National City Company to dispose of the ever-increasing volume of stocks. Important mergers took place in the food, moving picture, automobile, and banking fields. Concentration of economic power was the order of the day. Oddly enough, one of the first measures of recovery undertaken by the Roosevelt Administration in 1933 did not diverge from this pattern. The National Industrial Recovery Act provided for industrial self-government. With negligible labor and consumer participation, the autonomy program fitted into the pattern of concentration of power and control over prices, so well outlined in previous decades. In the opinion of many, the Supreme Court decision striking down the NIRA in 1935 was an act of mercy, disposing of a law which had aheady failed in its purpose.

As a by-product of the struggle for power, there was an ever-increasing wave of speculation. The land speculation of the early nineteenth century had yielded to the stock speculation of its later decades and of the twentieth century. The results were cruel. A recurrent pattern of panies and crises brought unemployment and misery to millions. The panic of 1873 was due in great measure to excessive and imsound railroad construction, accompanied by the financial overtones described above. Financial factors contributed largely to the panic of 1884 and added to a similar collapse in 1893, and to the brief reactions (in 1903, 1907, and 1914) which interrupted the generally prosperous period 1897–1920. Unsound speculation in securities, badly conceived mergers, and mistaken banking policies led to brief but severe recessions. The business declines in 1914 and 1920 can be considered as abnormal, since they resulted from war dislocations, but the old causes predomnated in the crash of October 1929. During the prosperous Twenties, a many-faceted boom was in progress. The popularization of the automobile had expanded industry and road building, war building scarcity gave way to a wave of urban construction and real estate projects, and foreign loans financed an expanding trade in spite of tariff barriers. Even at its best, however, prosperity was spotty, with the farmer in

great distress, and the coal, shipbuilding, nailroad equipment, textile, and leather industries badly overexpanded. More dangerous, however, was the frenzied wave of speculation which swept the nation. Stocks and real estate were inflated far beyond their value, judged by even the most sangume estimates of carning-power. Uncontrollable debts were contracted in the effort to build up vast industrial and utility empires. Widespread fraud and deceit added to the unsoundness of these intricate and complex structures. Mass hypnotism and financial chicanery could stave off but not prevent the inevitable collapse. When it came, the banking system, the lifeblood of the economic system, was so entangled in speculative loans that it was paralyzed by the break. Everything seemed to give, and in a few years industry was crippled, commerce was stifled, and there remained but the bleak facts of unpayable debts and millions of unemployed workers.

While these spectacular activities were occupying the public eye, more prosaic banking developments were taking place. From 1860 on, a considerable controversy existed as to the soundest monetary and banking policies to be pursued by the nation. In general, the debtor group advocated currency expansion through the printing of greenbacks with no reserve of precious metal behind them. Fuiling this, it urged the use of silver as reserves in the attempt to case the supply of money and raise prices. Conservative financial groups fought both moves. In 1875 Congress decided not to coin silver dollars, but reversed itself in 1878 through the Bland-Allison Act. Nevertheless, the action of the government in resuming payments of gold for its currency in 1879 and the retirement of money and bonds issued during the War Between the States prevented any great expansion in the supply of currency. After indecisive action for seventeen years, a great political campaign was fought over the issue in 1896, when William Jonnings Bryan claimed that mankind was being crucified on a cross of gold. He failed, and conservative eastern capitalists ruled the scene. A gold standard was finally adopted in 1900, but credit stringency during the following decade kept alive the plea for reform.

<sup>6</sup> For details of the activities labeled "high finance," the student should read the popularly written books of M. Josephson, The Robber Barons (Harcourt), and F. L. Allen, The Lords of Creation (Harper). Other good biographical studies include: M. Josephson, The Politicos and The President Makers (Harcourt); G. Myers, History of Great American Fortunes (Modern Lilhary), J. T. Flynn, God's Gold (Harcourt), A. Nevins, John D. Rockefeller (Scribner), L. Steffens, The Autobiography of Lincoln Steffens (Harcourt), L. Corcy, The House of Morgan (Watt), H. O'Connor, Mellon's Millions (John Day), and C. W. Barron, They Told Barron and More They Told Barron (Harper) Needless to say, the facts of muckraking must be counterbalanced against the achievements of the American economy to gain a complete and objective picture.

The banking system of 1900 was so constituted that smaller banks tended to keep their reserve funds on deposit with big city banks, often receiving interest on such deposits. This led to inadequate funds for rural regions, and the rapid spreading of panic when speculative booms collapsed in the large cities. As a result, the Federal Reserve Act was passed in 1913, in the effort to decentralize banking and make more abundant credit available for the farmer. While the Federal Reserve System was a notable improvement, the practice of using bank funds in connection with speculation continued. When this custom contributed to the severity of the 1929 crash, new banking laws were enacted in 1933 and 1935 which effectively prohibited the use of bank funds in security speculation. At the same time, a Federal Deposit Insurance Corporation was established to insure deposits in most banks.

A final financial consideration involves the fiscal policy of government. From 1860 to 1914, federal and state expenditures and taxes presented few novel aspects. Debts were manageable, and more traditional revenue sources such as excise taxes and tariffs for the federal government and property taxes for lesser groups were sufficient. With the First World War, debt increased and so income taxation was resorted to, having been authorized by the Sixteenth Amendment in 1913. During the Twenties road building and civic improvements increased city and state debt, resulting in the assumption by the federal government of the main responsibility for relief during the depression of 1929. As an effect of relief and public work expenditures, federal debt rose rapidly towards the fifty billion mark, a record which was to fall when the Second World War boosted the total to nearly three hundred billion. As federal debt rose, personal and corporate income taxes were increased accordingly. Currently the average citizen pays in taxes nearly one quarter of his taxable net income.7

The People Strike Back. It has been noted that serious abuses were by-products of the growth of the corporation. Of these, one of the

<sup>7</sup> For further reference on agriculture, transportation, commerce, industry, labor, and finance during the period 1860–1945, consult: H. U. Faulkner, op. 6tt., chs. 17–31; C. W. Wright, op. cit., chs. 27–46; C. A. and M. R. Beard, op. cit., chs. 18–30, E. E. Edwards, "American Agriculture—the First 300 Years" in Farmers in a Clausging World (Government Printing Office), V. S. Clark, History of Manufactures in the United States (McGraw-Hill), H. U. Faulkner, The Quest for Social Justice (Macmillan), J. R. Commons and others, History of Labor in the United States (Macmillan); W. Z. Rupley, Railroads (Longmans); E. R. Johnson and others, History of Domestic and Foreign Commerce in the United States (Carnegle Institution), D. R. Dewey, Financial History of the United States (Longmans); P. T. Moon, Imperialism and World Politics (Macmillan); C. A. Beard and H. E. Smith, The Old Deal and the New (Mucmillan); and C. G. Gaines and R. J. S. Hoffman, Origins and Background of the Second World War (Oxford).

more portentous was the corruption of public life in the interest of private profit. It would be a one-sided picture, however, if only this aspect of political development were portrayed. Equally important are the movements of reaction which characterize the period after 1860. Reference has already been made to the organized protest of the farmers, known as the Granger Movement. This surge of unrest manifested itself as an attack on railroad exploitation, a protest against restrictive monetary policies, and an effort to combat the monopolistic effects of the movement of consolidation. In this many-sided reaction, it is important to distinguish between objectives and methods. The injustices against which they protested were real; some of them persist to the present day, but others no longer exist by virtue of this and successor movements. It may be correct to dismiss some proposed remedies as crude and unsound from the economic viewpoint, but the publicizing of evils did lead to reforms which were sound. In particular, the monetary proposals of the Granges were extreme, but they contributed a real if remote share to the enactment subsequently of the Federal Reserve Act in 1913. Again, the inflationary monetary proposals attached to the Agricultural Adjustment Act of 1933 were dangerous, yet the nation was able at that time to cast off from gold and to adopt (for all practical purposes) a managed currency.

One of the first effects of Granger attacks was the enactment of state laws regulating the railroads. Illinois and Minnesota in 1871 and Iowa and Wisconsin in 1874 attempted by law to establish orderly, reasonable railroad rates. The last-named state was to become a laboratory of social legislation, anticipating many of the laws and procedures which were later adopted by the federal government. Among the earliest of the regulations to mark the decline of laissez faire was the Interstate Commerce Act of 1887, enacted to regulate railroad rates and to prevent monopoly in this field. It was followed by a more general attack on concentration, the Sherman Antitrust Act of 1890. Neither of these laws was immediately effective, since vague wording and court interpretation effectively nullified the intent of the reformers. But they marked a beginning, and better laws followed them.

A new reform movement dated from the *muckraking* exposés, beginning in 1903. At that time Ida M. Tarbell pilloried Standard Oil, Lincoln Steffens cast the spotlight on political corruption, Thomas Lawson described the "frenzied finance" of Wall Street, Upton Smelair and Charles Edward Russell excoriated the beef trust, Ray Stannard Baker denounced the railroads, and B. J. Henrick told of the illegal practices of insurance companies. These charges were seized upon by Theodore Roosevelt who used them for campaign material. Under his adminis-

tration, the railroad laws were strengthened and vigorous antitrust prosecutions inaugurated, among them the famous Northern Securities case, aimed to dissolve a holding company which sought to control all the railroads of the Northwest. This movement carried through the dissolution of the Standard Oil Company and the American Tobacco Company. Another reform under Roosevelt was the Pure Food Acts of 1906 and 1907, which were directed at the abuses in the meat-packing and other food industries.

Succeeding the Roosevelt "Square Deal," after an interval of four years, was the "New Freedom" of Woodrow Wilson. The fruits of his program were the Federal Reserve Act; the Clayton Act (1914), which strengthened the Sherman Antitust Act and exempted labor unious from its provisions; the Farm Loan Act (1916), which gave some hope to the credit-starved farmer; the Underwood Tariff (1913), one of the few reductions in many decades; the income tax, as a fairer method of taxation than import duties; the Federal Trade Commission Act, which set up a body to administer in part the antitust laws; and lesser acts, to help railroad labor and scamen. A record like this would be remarkable under any circumstances; it was phenomenal under the troubled world conditions of 1914–1916.

The First World War was followed by a period of normalcy which was to culminate in the depression of 1929. As a result of the severity of this depression, a new President was inaugurated in 1933, and the "New Deal" of Franklin D. Roosevelt was under way. Under the New Deal, a really drastic and comprehensive program of economic and social reform was enacted. In a period of six years practically every phase of agricultural, industrial, commercial, and financial life was modified or regulated. The farmers were benefited by a series of laws to control production, lessen the burden of debt, and facilitate financing and marketing. Abuses in banking and security speculation gave way to strict regulation. Labor was given social security, protection of its right to organize, and minimum-wage legislation. Public utilities were curbed, and the consumer of food, drugs, and cosmetics was aided by a stronger law than the earlier Pure Food Acts. Strict enforcement of antitrust laws was later used as a reform and recovery measure, after earlier attempts (NIRA, Robinson-Patman Act, Miller-Tydings Act) to promote recovery through control of competition had failed.

Relief was offered to the younger unemployed through the Civilian Conservation Corps. Work relief was given through various agencies, the more permanent being the Public Works Administration and the Works Progress Administration. In the meantime, homes were protected from foreclosure through the Home Owner's Loan Act (1933).

Less successful than the attempts at relief and reform were the measures undertaken to promote recovery from the depression. One of the first expedients was the National Industrial Recovery Act, which was predicated on the hope that industry could agree to raise prices and wages and avoid rumous competition. This attempt failed both through evasion and the use of codes to restrict production and, consequently, employment. The next effort was to raise prices by reducing the amount of gold in the dollar. The main effect of this measure was to prove the independence of modern money and banking from any great reliance upon gold. With the failure of monetary measures, a public works "pump priming" program was attempted, based on the theories of the English economist, John Maynard Keynes. He insisted that governmental expenditures would have a multiple and accelerated effect by stimulating industrial purchases and consumer disbursements. This program likewise failed to accomplish the desired result, but the reason for the failure has been bitterly debated. Some claim that it was succeeding in 1937, when business choked off a boom through price increases. Others held that we were entering a new phase of economic maturity, when business would be unable to employ all available workers and permanent federal spending would be a new saty. Finally, conservatives asserted that lack of confidence in government prevented business from expanding. The war ended the immediate controversy, but the prospects of imminent victory made it one of the major issues in the presidential campaign of 1944.

It can be seen that America has reached the end of an era and the beginning of a new phase of development. Without accepting the thesis that we have arrived at a stage of maturity and economic stagnation, it seems evident that the wild upsurges of the past are not likely to recur in the immediate future. It is likewise improbable that the financial and industrial abuses of the past century will be repeated. The temper of the nation has changed, with laissez faire permanently rejected. It would be pleasant were it possible to contemplate a screne future, with sustained prosperity the order of the day. Unfortunately two critical problems remain unsolved. The major task before us is to provide normal employment and decent conditions for our citizens, and that without carrying political control to the extent that freedom vanishes. It is easy to state that business must give jobs or else government will take over the task. It is infinitely harder to work out the precise rules and conditions whereby business may achieve this result without excessive political control. The "either/or" method led to

<sup>&</sup>lt;sup>8</sup> For readings on the reform movements see the references above, footnote 7, page 49.

totalitarianism in Europe. Americans who value political freedom face the stern task of achieving economic democracy without sacrificing liberty. A student might well use this as a unifying theme in studying the diverse problems treated in the chapters to follow.

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## THE ENCYCLOPAEDIA OF THE SOCIAL SCIENCES

Main articles: Agriculture, U. S.; Commerce; Labor; Industrialism; Transportation; Public Finance; Banking, Commercial, U. S.; Money. Subsidiary articles: Agrarian Movements; Farm Bloc, U. S.; Farmers' Organizations; Frontier; Grange; Homestead; Land Scttlement; Plantation; Bryan, W. J.; Debt; Astor, J. J.; Grain Elevators, Agricultural Policy; Farm Relief; Land Grants; Public Domain; Land Speculation; Free Silver; Turner, W. J.; Railroads; Rate Regulation; Waterways, Inland; Roads; Motor Vehicle Transportation; Colonies; Fur Trade and Industry; Merchant Marine; Tariff; Imperialism; Monioe Doctrine; Pan-Americanism; Combinations, Industrial; Interlocking Directorates; Trusts; Carnegie, A.; Laissez Fuire; Captain of Industry; Shipbuilding, Industrial Workers of the World; Knights of Labor; Debs, E. V.; Gompers, S.; Powderly, T. V.; Banks, Wildcat; Caises; Cooke, J.; Fish, J.; Gould, J.; Hill, J. J.; Huntington, C. P.; Morgan Family; Vanderbilt Family; Corruption, Political; Boom; Bubbles, Speculative; Speculation; Corner, Speculative; Taxation; Hamilton, A.; Covernment Regulation of Industry; Constitutions; States' Rights; Articles of Confederation.

## The Cultural Background of Modern Life

THE ONWARD march of history has produced many changes. Man can now move almost with the speed of sound. He can talk with others thousands of miles away with little less trouble than would be required to visit a neighbor. Powerful machines are at his disposal. Science has made the marvelous a commonplace. Yet, any description of the economic world of today in terms of physical production alone would be basically incomplete. It has been the habit of many popular writers to portray attractive pictures of our production possibilities, and hence to predict the abolition of poverty in our day.1 These analyses have their place, provided a student understands the practical difficulties to be faced in achieving such an end. The abolition of poverty is more than an engineering task. Wonders worked under the stimulus of war are not necessarily a guide for peacetime achievement. What must be remembered is that economic activities take place within a complex legal, social, and cultural framework. This background modifies considerably the range of possibilities in the field of physical output.

### CAPITALISM AND PRIVATE PROPERTY

The environment of our economic system is called *capitalism*, a philosophy or method for using economic resources. Technology of production is not greatly different in a noncapitalist state, such as the Soviet Union, as compared with the United States or Great Britain. The U.S.S.R. has adopted the techniques of mass production and large-scale industry which characterize one phase of our economic system. It pays wages to workers and salaries to government officials. Soviet technicians admire our methods and strive to imitate them. The Jun-

<sup>&</sup>lt;sup>1</sup> Cf. S. Chase, Goals for America (Twentieth Century), and The Economy of Abundance (Macmillan), F. Henderson, Economic Consequences of Power Production (John Day), and H. Loeb, Chart of Plenty (John Day).

damental difference between the systems lies rather in the sphere of control. Communist industry is state-owned and state-controlled. Capitalist enterprise is owned and controlled by individual citizens, who regulate its use. Individual enterprisers hire workers and determine wages and prices. Their control can be limited and guided by outside forces, such as the state or labor unions, but so long as it is not abolished, we have a capitalist economy. It is controverted as to how far limitations may proceed without destroying the institution which they regulate, but in principle all agree that certain boundaries must be observed if we are not to pass into socialism, communism, or fascism.

Fundamental to capitalism is the institution of private property. The right of individuals to own and control factories, mines, stores, and the like, as well as their homes, clothing, and similar personal items, is implied by this term. Private property is not coextensive with capitalism, since it also exists under fascism and to a lesser degree under some forms of socialism. The fascist state rarely probabilists ownership, but it does exercise dictaterial control over the use of property. Strict socialism, on the contrary, would not permit private ownership of factories, railroads, and similar instruments for the production and distribution of goods. In contrast to these limitations, capitalism demands the fullest possible rights of property. Without this basis, free enterprise would be inconceivable in modern times.

Property is as old as man, although the forms and varieties of ownership are many. In the past the complexity of property rights have served as a rough indicator of the degree of civilization attained by a people. Primitive communities have been somewhat hazy in regard to the distinctions between "mine and thine," but higher cultures almost invariably have tended towards an intricate code of ownership. This fact has led many to conclude that property is a natural right, inseparable from man living in an advanced society. Such was the attitude of the Roman jurists, the medieval theologians, and of many modern thinkers, such as John Locke.2 The argument is that man, psychologically speaking, needs such an institution for an orderly economic system. Private ownership establishes incentives which would be lacking in communal ownership. It affords a means of peaceful distribution for the goods of the earth. The alternatives to private possession and control are held to be either confusion, or intolerable compulsion as means of counteracting such disorder. A thorough dis-

<sup>&</sup>lt;sup>2</sup> The Carlyles give the Roman and medieval conceptions of property in their definitive work, The History of Medieval Political Theory in the West (Putnam). For a modern legal treatment, see C. R. Noyes, The Institution of Property (Longmans), and the article on "Property" in the Encyclopaedia of the Social Sciences.

cussion of this point will be reserved to the concluding chapters, but at this point it is useful to note the important function of private property in the capitalist system.

An interesting recent development has been the broadening of the interpretation of property rights. This extension has been two-fold, involving a much wider application of traditional concepts and, in addition, the inclusion under property rights of many claims formerly not considered as property. In the first category would be the notable concentration of holdings in the hands of individuals or corporations. While there were wealthy men in Roman and medieval times, there was never such a massing of property vital to the continued existence of the community. If a student were to visualize the assets possessed by the thousand largest nonfinancial corporations in the United States. or the control exercised by the hundred largest financial groups, he could appreciate the aggregation of power which has been built up through property rights. Economic life in the nation would be paralyzed were these groups not to function. It must be noted that the apologists for property as a guaranty of freedom parely envisaged such concentrations as exist today. Conditions have so changed since the time of Ulpian, Aquinas, or Locke that a socialist claims their arguments are no longer valid. As a result of these facts, defenders of the institution of property today plead for wider actual ownership to safeguard capitalism against collectivist attacks.

A second change in the extension of property involves the inclusion of rights not formerly attached to this institution. Modern court decisions have considered many intangible claims as property rights. An important step in this direction was taken when the Supreme Court in 1886 decided that the corporation was a person and as such entitled to the rights of persons guaranteed in the Fifth and Fourteenth Amendments.<sup>8</sup> All the protection given to the property of individuals was now extended to this legal entity, the corporation. At the same time, the Court further modified the traditional definition of property rights by including such intangibles as the right to enter business and to earn income, and the right to enter into any type of contract not forbidden by law. Among these was the famous "yellow dog contract" whereby a worker as a condition of employment agreed not to join a labor union. Any interference with these and similar contracts by social legislation was deemed to be confiscation of property without due process of law. The good will of a firm was also considered to

<sup>&</sup>lt;sup>3</sup> Yick Wo v. Hopkins, 118 U S. 356; and Santa Clara County v. Southern Pacific Railroad Co., 118 U. S. 394. For other cases, cf. "Freedom of Contract" in Encyclopaedia of the Social Sciences.

be a property right, with the result that picketing and boycotts were enjoined by the courts. Franchises, trademarks, and patent rights were likewise protected by the laws of property. Such extensions of rights, in addition to the insistence upon the inviolability of these same rights, made our courts until recently the defenders of the broadest possible freedom for enterprise.

A different legal development was to lead to further changes in the concept of property. Hitherto it had been taken for granted that ownership and control were so intertwined as to be joint aspects of pronerty. They were not the same thing, since control could be delegated to some extent, as when property was rented to another. But even under these circumstances, the ultimate control of the owner was not impaired. With the development of the modern corporation, however, permanent separation of the two became something more than a possibility. Through processes to be described in Chapter V the owners of a corporation (stockholders) often had no practical means of exercising control over their property. Furthermore, the multiplicity of securities often left them confused as to the extent of their actual ownership. The result of both processes was a considerable degree of uncertainty in regard to actual property rights in our most important form of business. The product of this development is expressed trenchantly by two modern students of the question:

The only example of a smilar subjection of the economic interest of the individual to those of a group which appears to the writers as being at all comparable, is that contained in the Communist system . . . As a qualification of what has been known as private property in Anglo-American law, this corporate development represents a far greater approach towards communist modalities than appears anywhere else in our system. It is an odd paradox that a corporate board of directors and a communist committee of commissars should so nearly meet in a common contention.<sup>4</sup>

Thus it happens that defenders of property, who argue in terms of the home and the small shop or factory, find themselves protagonists of a system radically different from their assumptions. Absenter ownership and ownership without control are phenomena quite distinct from the country store and the small-town garage.

The evolution in the concept of property has added strength to two distinctions which qualify to a marked degree the absoluteness of ownership. The first qualification is that the right of ownership should not entail unlimited power to use property. The use of property is bound to have impact upon the rights of others, and courts today are

<sup>&</sup>lt;sup>4</sup> A. A Berle and G. C. Means, The Modern Corporation and Private Property (Macmillan), p. 278.

more willing to limit the use of property in view of community rights. Thus, the owner of an automobile or a gun is definitely circumscribed in the use of his property. Likewise, the owner of a factory finds his property encumbered by a multiplicity of regulations: ordinances against smoke enforce changes in his boiler room, minimum-wage laws reduce his freedom to hire help at any price, and pure food and drug regulations may involve careful control over his output. This new philosophy is loosely put in the phrase "human rights take precedence over property rights." More accurately, property, such as wages, which vitally affects the human person, is considered more privileged than property which may be merely an incidental factor in the lives of thousands of stockholders. Courts today speak of property "affected with public interest" as being subject to special surveillance. Thus, in modern states a whole code of legislation belies the older concept that a man could do what he pleased with what he owned. Owners have obligations as well as rights.

The second qualification is found in the distinction between the social and the individual aspects of ownership itself. Nearly all property contributes to the welfare of its owners and at the same time exercises some influence upon society. In certain types, the association with the individual personality is so great that society is deemed to have few rights in regard to them. Thus, the home, personal possessions, and the like are generally inviolable provided they do not work an injury upon some person. On the other hand, a huge shipyard or automobile plant, employing thousands of persons, is considered to be something more than a chattel of the owner. The use of this object could have vital repercussions upon an entire city. The policy of certain corporations could even affect a nation. As a result, the affected parties hold that they have a definite, if limited, right in such property. This is the philosophy underlying much modern social legislation. A similar attitude governs progressive tax policies. The right of ownership generally is not impaired, but in some cases it is hedged within a definite framework of public policy.

Unquestionably, recent limitations upon property rights are reactions to the excessive extensions made by nineteenth century jurists. The process of introducing these limitations involved bitter struggle. In the heat of controversy charges were made that property rights were being abolished and collectivism introduced. But more objective thinkers in England and America maintain that certain modifications are compatible with the survival of capitalism.<sup>5</sup>

<sup>&</sup>lt;sup>5</sup> Cf. E. Johnston, America Unlimited (Doubleday, Doran), and F. A. Hayek, The Road to Serfdom (Univ. of Chicago). On property, see R. A. Dixon, Eco-

### THE SPIRIT OF FREE ENTERPRISE

If the right of private property is a pillar of capitalism, freedom of enterprise is no less important as a support. Behind this concept is the philosophy that the competition of free men can lead to a better society than would be possible under any system of control. The heart of this attitude is that men should be free to enter or leave business and to conduct it according to their own best judgment, subject only to the impersonal control of a competitive market. As with property, certain modifications for the interest of society may be permitted, although reluctantly, provided business is under the rule of law rather than arbitrary control.

Freedom of enterprise was attained through several stages. The first might be termed the substitution of contract for status. In medieval society, the individual was at the same time a member of a group or class. As serf, lord, or king he had a definite and precise status in society. That position carried with it both rights and obligations. To a great extent, these positions were not easily interchanged. Normally a person would die in the condition conferred upon him by the accident of birth. It is true that the rise of the middle or merchant classes interfered with the symmetry of this pattern, but on the whole it persisted long after the decline of feudalism. Remnants survive to this day in the fact of aristocracy, even in democratic countries. But, substantially, modern economic life is predicated upon contracts entered into by free individuals, rather than upon status. The eighteenth century, which worshipped science, naturally found a legal parallel to the atomic theory of physics, with the individual rather than the group as the object of concern. The relationships of these individuals were to be determined by free contracts into which they had entered. More recently, however, the wheel has turned again: In this new cycle individuals express themselves through associations, such as trade unions or employers' organizations. Nevertheless, a basic judividualism remains, with the group subordinate to its members, rather than the reverse.

The second phase of free enterprise came with the advent of laissez faire. The modern state which succeeded feudalism was highly nationalistic. As was noted earlier, it subjected the business man to the

nomic Institutions and Cultural Change (McGraw-Hill), chs. 2-4; C. R. Noyes, op. cit.; A. A Berle and G. C. Means, op. cit.; A. J. Eddy, Property (McGlurg); R. T. Ely, Property and Contract (Macmillan); and T. Veblen, Absentce Ownership (Huebsch), and Theory of Business Enterprise (Scribner).

restraints of mercantilism. The reaction to these bonds was the call for complete freedom, laissez faire, laissez passer being the watchword of the hour. The omnicompetent state was replaced by the economic man, that perfectly rational, albeit selfish, abstraction who was competent to regulate his own affairs without outside interference. The first and negative phase of this new philosophy of Liberalism was the rejection of state interference with business. Like most reactions, it went to extremes and held that business and government were totally different spheres, without any appreciable common interests. Covernment could help business by enforcing freedom of contract and by defending property rights, but there its activities should cease. It was an umpire enforcing rules impartially, rather than a player in this fascinating game. More positively, the second phase of Liberalism envisioned perfectly rational men engaged in the "higgling and haggling" of the marketplace. As producers they calculated costs to the last farthing. As consumers they balanced satisfactions with the nicety and refinement of a metaphysical debate. As a result of their contest, the value of goods was determined and expressed by the market price. At the same time, an equitable distribution of the product between different factors of production was achieved. Such supremely rational endeavors of vitally interested parties would do more to bring about a fair appraisal of worth than any decision by commission or board.

Lest some persons become squeamish over this new philosophy of unlimited competition, likening it to the law of the jungle, a philosophical justification was at hand. Jeremy Bentham established to the satisfaction of many predisposed believers that pleasure and pain were the fundamental drives of mankind, each individual seeking a maximum of one and a minimum of the other. With an exactitude which would have made a behaviorist psychologist envious, Bentham worked out a moral arithmetic. But since each individual obtains the greatest satisfaction through such self-seeking pursuits, it is merely a matter of addition to conclude that thus the greatest welfare of humanity is achieved. Human well-being is but the sum of the individual achievements. Accordingly, through a beneficent Providence, the selfishness of individuals is transmuted into the welfare of all. Furthermore, since pleasure-seeking is natural to man, no other course is in accord with man's nature. By this stroke of insight, economics could now be placed on a plane with the physical sciences and their magnificent achievements.

The mechanism which was to economics as gravity was to physics or evolution to biology was the *law of competition*. Here could be had an impartial appraisal of the worth of every man and every prod-

uct. If some genius invents a guard for a 1azor, thousands will flock to purchase it. His talent will be rewarded, and the sluggishness of the producers of straight razors punished. If a laborer is not efficient. he will be passed by in the marketplace, while his more energetic brethren are sought by intelligent enterprisers. A worker who is overpaid will find that another will take his job at a lower price, while the really exploited worker can discover dozens of employers who recognize his real worth and pay accordingly. In this marketplace, woe to the producer of inferior or shoddy goods. The economic man as consumer will detect the fiaud and penalize him accordingly. Thus every man will receive his due. Conversely, then, the rewards or penalties meted out by the economic system are just and in accord with the eternal nature of things. If children are exploited by heartless overseers, if the flower of English strength rots in the slums of Manchester and the wharves of Liverpool, these victims are receiving but their just deserts. Should the proletarian worker seek to protect himself by labor unions, or the hard-pressed business man beg for a "live and let live" policy in place of ruthless competition, they are flaunting nature itself. Their doom is inevitable.

Obviously such an extreme individualism could not endure. It was unrealistic. The economic man does not exist in modern society, where consumers can be deceived, where laborers can be paid varying rates for the same work, and where efficient business men can be ground down by superior economic power. It is still defended in the same irrational way that partisans will defend a town or city as being the best in the country. But more thoughtful business men and scholars are seeking a new definition. They are now willing to submit to a framework of social legislation, but they want a rule of law rather than government by commission. They insist that the profit motive must be kept alive, although they are reconciled to heavy taxation of individual incomes. If government must control abuses, it should do this in a discriminating manner rather than by punishing all for the abuses of the few or even of the many. They now ask freedom from arbitrary or punitive control, rather than absolute autonomy.

This area of agreement of modern business diverges into sharp conflict on the question of competition. Some thinkers, such as Edwin Nourse of the Brookings Institution, Eric Johnston of the United States Chamber of Commerce, and Friedrich Hayek of the London School of Economics want a restoration of competition. They oppose monopoly in every form. Other equally powerful groups, identified with American and British industrial and banking interests, hold that the day of all-out competition is past. They favor a rule of reason, a cartel move-

ment at least in foreign trade, and self-regulation of business to avoid the dislocations of competition. This position is publicly advocated in England and more deviously promoted here. Thus, there is sharp and definite cleavage in current business thought in regard to one of the functions of free enterprise. One group insists that automatic control by the market is of the essence of individualist capitalism. The other maintains that planning and order are necessary today. It feels that so long as business has adequate voice in shaping these controls, the substance of free enterprise will remain unimpaned. It is not possible to go further into this controversy at this stage of our study. The data to be presented in subsequent chapters may furnish grounds for an intelligent point of view on the question.

In summary, it can be seen that the concepts of property and free enterprise, as constituent elements of capitalism, have varied considerably throughout the ages. Of the points noted above, capitalists stress private ownership of wealth, freedom for the enterpriser to use his property in search of extensive profit, individual initiative, the rule of law, and a free market. They have reluctantly accepted much social legislation and government regulation, feeling that to date such controls have modified but not abolished the profit system. They differ among themselves upon the implications of concentrated economic power and monopolistic industry impinging upon the free market. Nevertheless they are in substantial agreement upon fundamental points which must be preserved, if the capitalist economic system is to survive.

The totality of the conditions which make up capitalism may be characterized through the popular expression "the rules of the game." Our present economic order is an interrelated whole, which cannot be modified substantially in any major part without endangering the system in its entirety. This point has relevance in regard to the many problems and difficulties which will be presented throughout the course of the book. Many of these, such as waste, poverty, and insecurity, are quite distressing. Our natural reaction is impatience at their continuance in an era where technology opens vistas of a more orderly world in which want would be abolished. A classic example is the revulsion of many against the destruction of food as unmarketable, while millions are hungry. Our instinctive impulse is to call for direct government distribution of this surplus. It might be possible, however, that such government action would in its turn bring about even greater economic and social dislocations. Hasty and ill-considered programs of reform often do bring in their wake a train of evils which may exceed those which are being removed. Hence, in the following

pages problems will be treated within this framework of capitalist economics, and solutions suggested which are not basically disruptive of this set of rules. At the conclusion, an analysis of alternative economic systems will be presented for the purpose of comparison and discussion. In the meantime, the student can gain valuable training by the effort to think through to their ultimate implications off-hand and facile solutions to age-old problems.<sup>6</sup>

#### THE SCIENCE OF ECONOMICS

In addition to the general rules of our economic system, there are certain specific terms which must be clarified as a preliminary to further study. One of the fundamental facts underlying economic activity is the existence of unsatisfied human wants. Desire has both a biological and a psychological basis. Man has physical needs, such as food, clothing, and shelter. He also has psychological impulses and cravings, such as the will for power, success, esteem, security, affection, and the like. Both types of cravings are powerful motivating forces of human activity. These drives in turn must seek realization in the inhospitable atmosphere of the present world. Food and clothing are not available for the asking or wishing. Not everyone can own a yacht or be a successful leader in business or the professions, Of some things there is an absolute scarcity. It would be physically impossible to supply diamond rings to every woman in the world or abundant radium for every hospital. In regard to other things, the scarcity is only relative. Thus, the United States or the Soviet Union need never lack for basic foods, provided men are willing and machines are available to till the fields. There are psychological scarcitics as well. Not every age and nation can have a Shakespeare or a Daute. Only a few have the talent to be statesmen, brilliant surgeons, or gifted teachers. Accordingly, these facts of limited resources and the need of effort to exploit them provide the foundation of economic activity. Expressing the same idea negatively, in a world where everything was available there would be no economics.

In the attempt to satisfy these wants, men are engaged in constant activity. In the United States, for example, there would be in a normal year about eight and one-half million persons employed in pro-

<sup>&</sup>lt;sup>6</sup> For readings on free enterprise and general capitalism, see W. Somburt, The Quintessence of Capitalism (Dutton); A. Fanfani, Catholicism, Protestantism and Capitalism (Sheed); J. A. Hobson, The Evolution of Modern Capitalism (Scribner), J. R. Commons, The Legal Foundations of Capitalism (Macmillan); T. Veblen, op. cit.; R. A. Dixon, op. cit., chs. 5–12, 16–19; and F. A. Hayck, op. cit. Further readings on the free market will be found in Chapter XII.

ducing food or the raw materials for food processing or for clothing. About one million workers would turn out other raw materials through mining or related occupations. Half of these would be in the coal mines and the remainder in metal mines and stone quarries, or in oil and natural gas extraction. Processing these raw materials would be nearly eleven million workers engaged in manufacturing. These laborers would be working on food products, textiles; lumber and other moducts from wood; chemical industries; iron, steel, and other metals; machinery; and transportation equipment. To move the finished and raw materials, over three millions are employed in transportation, communication, and public utilities, with over half of this class engaged by the railroad and trucking companies. On the selling end of the process, over seven and one half million are occupied with wholesale and retail trade. Vital to all business activity is the work of the million and one half who specialize in finance, insurance, and real estate. Equally important are the million engaged in service to business or in repair work. Personal services, such as domestic service, hotel service, and laundering and cleaning bring livelihood to four million more. Three and one third million perform valuable functions as teachers, doctors, lawyers or elergymen. Nearly four hundred thousand are engaged in furnishing annisement and recreation. Normal government work calls for nearly two million workers. Thus, a total of over fortyfive million persons form our working force in a typical prewar year. Of these, thirty-four million are men and eleven million are women. Later figures raise this total above fifty million.

The working force of a nation is engaged in satisfying the varied wants of a people. They contribute to the possession of goods and services in the form, place, and time desired, thus performing useful activity. The general name of all these functions is wealth production. Each of these individuals is engaged in adding to the national wealth. In these days, of course, few attempt to produce for their own needs alone. The worker specializes in the field he knows best. His product is given a value by the economic system and he receives his share of that value in his wages. Since wages are paid in a common medium of exchange, called money, he is able to exchange his share of the final product for whatever goods and services he may need. The same procedure is followed by other workers, and by any other persons who contribute their labor, money, land or guidance to the economic process.

Economics, then, may be defined as the science which treats of the

<sup>&</sup>lt;sup>7</sup> These figures are based on employment in March, 1940. For full details, ci. Statistical Abstract of the United States (Superintendent of Documents).

laws of wealth production, exchange, distribution, and consumption. The term wealth is here used to refer to goods or services which are at the same time useful and relatively scarce. Many goods are useful, but so abundant as to be practically taken for granted. Air and sunlight, for instance, raiely enter into the economic world. Certain types of services likewise are taken for granted. The attention given by a mother to her child is often more valuable than a similar service performed by a paid nurse, but the former service is assumed to be freely available in the circumstances. As a rule men consider the production of goods a more fundamental form of wealth creation than the production of services. Food, clothing, and housing are more primary than education, recreation, and legal advice. As a result the greater proportion of our working population is engaged in the production and distribution of goods. Mining, manufacturing, and transportation are still our basic occupations, although recent studies have revealed a distinct trend toward the various service industries or professions.

Production involves the creation of utility. Anything which adds to the usefulness of a good belongs in this category. Agriculture comes closest to production in the ordinary use of the word, but to the economist many more activities are wealth-producing. The miner, railway worker, distributor, and truck driver all contribute to the heating of our homes in the winter by bringing coal from the earth to our bins. The textile worker and the department store share in the process of turning raw cotton into useful sheets, shirts, and other items of apparel. The radio broadcaster and the doctor are likewise useful producers, not of goods, but of services.

The utility added to goods or services by production is conventionally divided into utilities of form, place, time, and ownership. Thus, a piece of silver is made more useful when it is shaped into a beautiful set of tableware. The transporting of this from the factory to the store and then to the home brings it to a place where it can be used. Time utilities are created by planning and storage, so that goods are available when they are wanted. Finally, the whole system of exchange facilitates the possession of goods and the use of services. In this way the needs of the consumer are usually satisfied.

In a capitalistic economy, workers rarely produce merely for their own needs. The value of their production is measured in terms of money and the goods are exchanged for money. The distribution of the total product to the various producers and the exchange of these products are vital forms of economic activity. Finally, the ultimate goal of the entire process is consumption or the satisfaction of wants through diverse goods and services. Of these activities, production

and exchange are the most fundamental. The structure and functioning of these processes determine to a major degree the forms of distribution and consumption. Accordingly, the bulk of the subsequent chapters deal with production and exchange.

The measurement of the flow of goods and services produced in any given period is called income. In 1940, for example, the American people produced goods and services valued at about seventy-four billion dollars. This income is distributed by means of money, which is honored as the equivalent of a portion of the nation's product. As an incidental result, money is often mistaken for real wealth. Many popular errors and delusions arise from this misconception. More sober thinking, however, would convince men of the fallacy of such reasoning. Were a nation straining its factories and labor force to the limit, no amount of new currency could force the production of additional goods. If, on the contrary, the owners of our natural resources and productive machinery would release their potential output only on condition that they receive a suitable return in goods or services, they would not be gullible enough to exchange their goods for the product of the printing press. Accordingly, the 1940 estimated value of our national wealth, three hundred and fifty billion dollars, is a measure of real things, not of the means of exchange.

Income may be spent at once for the personal satisfaction of the recipient, or it may be saved for future use. When such saved income is used by industry to command labor and raw materials for making instruments for further production, such as factories or machines, it is called capital. Transitory wealth has then become more permanent wealth. A substantial portion of the working population does not produce goods for immediate consumption, but rather specializes in making such instruments as will afford an ultimately larger production. (Some writers call this fixed capital. They also apply this term to mines, farm land, and other natural instruments of production. The term circulating capital is then applied to money used for the current needs of business.) This use of capital characterizes the workings of an advanced industrial economy.

Industries which specialize in producing machines and the like are called capital goods industries. Sometimes the phrase "producer goods," in contrast to "consumer goods," is used. Again, capital goods are called durable goods, although this latter category includes many consumer items, such as automobiles, refrigerators, furniture, and other relatively permanent objects. An interesting survey of the relationship between consumer and producer goods was undertaken in recent years by the Brookings Institution. These economists reached the conclusion

that the former was the more fundamental, and that capital expansion follows upon increased demand for various consumer items. This point is disputed by other economists, who maintain that investment is determined by other factors, such as profit expectation, business psychology, and the like. At any rate, it is clear today that money saving and capital formation are largely independent processes. Ever since 1929, there have been abundant funds and a scarcity of investment opportunities. The entire subject of the relationship between consumption, saving, and investment is one of the most important and most difficult topics in the field of economics. Some thinkers hold that the preservation of our democracy depends upon our ability to provide jobs through industrial expansion. This critical problem is treated at length in subsequent chapters on economic expansion and the business cycle.

The definition of economics just given would be considered somewhat narrow by such English economists as Keynes and Hobson. 'They would add the notion that economics is also a normative and regulative science. To them this discipline not merely explains how wealth is actually produced, exchanged, distributed, and consumed, but also how this should be done. The merit in this point of view is being more widely acknowledged in recent years. At the same time, however, this approach must be used with sound judgment. It would be a mistake, for example, to argue that an economic program must be adopted merely because it is highly desirable. It must also be shown that it is feasible. But within the realm of the feasible, the normative approach shows what may be desirable from the viewpoint of human welfare. Considerations of this nature, when they are deemed appropriate, are introduced into the following chapters.

<sup>8</sup> Cf the Brookings four-volume survey on The Distribution of Income in Relation to Economic Progress.

## Readings and References

#### GENERAL

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The Road to Scrfdom (Univ. of Chicago); A. Faniani, Catholicism, Protestantism and Capitalism (Sheed); R. T. Ely, Property and Contract (Macmillan); A. J. Eddy, Property (McClurg); R. A. Dixon, Economic Institutions and Cultural Change (McGlaw-Hill); V. Pareto, Mind and Society (Harcourt). See also the publications of the United States Chamber of Commerce (Washington) and the National Association of Manufacturers (New York).

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### How Wealth Is Produced

#### THE FACTORS OF PRODUCTION

'n THIS world wealth is usually produced, rather than discovered. Such a process demands toil, skill, and intelligence. With the passage of time, it is becoming increasingly complex. Nevertheless, economists are able to discern certain constant elements which are almost invariably associated with the production of wealth. These elements, called factors of production, are traditionally known as land (natural resources), management or enterprise, capital, and labor. Of these, the term "land" is likely to be misleading today, since the soil is but one of the many natural resources which furnish the raw material for production. "Management" refers to the work of the enterpriser, or risk-taker. This function involves the uniting of the other agents of production in proper proportion, and the supervision of the entire process. In this technical use, management would refer only to policymaking and risk-bearing officials, with subordinate leaders acting as their lieutenants. "Capital" as a factor of production is understood primarily as a physical entity, namely, the machines and tools which are at the disposal of the enterpriser. Finally, "labor" means the utilization of every type of human effort in the productive process. This effort may vary qualitatively from the skilled worker or the salaried employee to the common unskilled laborer. In using these terms, certain arbitrary decisions must be made as to classification and terminology, primarily because distinctions used to explain a simple and primitive economic system tend to be deficient in describing the intricate organism of today. Yet, little would be gained here by an involved study of words. Provided the realities of the existing system are adoquately portrayed, traditional terminology can be accepted without further comment.

The essence of sound production is the proper combination of the several factors and the correct size or scale of enterprise. The enterpriser, or entrepreneur, has the funds to purchase raw materials, machinery, and the services of labor. His skill in using these elements in

the right proportion will determine success or failure. Thus, for example, the proprietor of a lumber firm will buy enough logs to enable him to supply the local market as he conceives it. He will buy power saws and lathes, and hire labor. It is for his good judgment to determine the ideal amounts needed. It is obvious that a few power saws will do the work of many laborers employing hand tools. On the other hand, the machines are expensive and would be a poor investment if used only occasionally. Once he has installed his fixed equipment, he must calculate the right number of workers needed to operate the saws and lathes. If, for instance, he had five of each, he might get along with only ten workers, who could co-operate to haul the logs into position, cut them into manageable pieces, and feed these smaller pieces into the tools. After a while, however, the proprietor would realize that it would be more economical to hire other men and purchase other equipment for hauling logs and removing lumber, leaving the ten original workers to work full time at the power equipment. The new workers would produce more than they cost, since their presence permitted the full use of machines. Ultimately, however, a stage would be reached when additional workers would cease to pay their way. The last laborer to be hired, the so-called marginal worker, would produce only a slight amount above his wages. At this stage, capital and labor would have achieved a balance based on the correct proportion of factors for a given output.

The homely illustration just used exemplifies the process of production as it occurs in simple farms and small factories and in giant mass production industries. It is found that when other factors are constant, the addition of units of the remaining factor tends first to increase output. After a while, however, each new increment brings about a smaller increase until a stage is reached where total output actually declines. This generalization is called the Law of Diminishing Returns. It represents the hazard which every producer must face. It is his responsibility to vary the use of capital, materials, and labor until the right proportion is reached, so that further units of any factor would cost more than the increment in production is worth. The essential point in the law is that the successive addition of a factor or group of factors in a productive process, with the other factor or factors remaining constant, eventually reaches a stage where added units are less and less effective in expanding total production. This is the law as seen from the physical viewpoint. From this it follows that a point is reached where the value of the output becomes progressively less. Somer or later the value of added output attributed to a specific input is no greater than the cost of the input. At this stage, as will be seen in

detail later, it no longer pays to add this type of input, while the other factors remain constant.

The social implication of this law, as seen by Malthus and other writers on population, is that indefinitely increasing population means only misery and want, provided the supply of other factors is relatively fixed. Malthus felt that growing numbers of workers would soon outrun the food supply, as the stage of diminishing returns developed sufficiently. To date his pessimism has not been widely justified, however, since increases in capital, development of technical efficiency, and expansion of cultivation have made possible great advances in the standards of living.

Accurate planning and study of production are possible only if definite and uniform standards of measurement are used. The determining of such norms is not always easy. If, for example, quantity is used as a standard, it must be assumed that quality remains relatively unchanged. It would not be an exact comparison to list merely the number of automobiles manufactured in 1914 in contrast to 1941, since the modern car is a more complex instrument. To say that the United States produced 100,000 airplanes in 1944 glosses over the fact that the airplane is not a homogeneous unit. The four-motored Superfortress is hardly the same as a single-motored private transport plane. Thus, care should be used when dealing with quantitative statistics of complex items. In such cases, money value is often a better method for ascertaining relative output. Here, however, three important qualifications are necessary. In the first place, costs may vary considerably from time to time. The 1946 automobile is not only better than the 1905 model, but it is on the whole less expensive. Again, the whole matter of costs is relative to the general price level. If all prices rise, as they normally do during a war, then increased money value does not of necessity spell any real increase in output. A third point in regard to the price of goods is that a finished product may be expensive because the materials included are costly. Such would be the case were we to compare a gold with a stainless steel bracelet. If one firm were to produce ten thousand of the former, while another produced a million of the cheaper type, a comparison of product value would give a deceptive picture of their relative activity. A better method would be to compute the value added by manufacture.

It is clear that no single standard of measurement is perfect. In some cases, quantity is sufficient. In others, value or value added is a better norm. When money comparisons are made, economists often try to make allowances for general price rises. Thus, for example, if wages rise forty per cent during a war, while the cost of living increases by

half, it is customary to say that money wages increased, but real wages (what can be purchased with a worker's income) declined. Under such circumstances, it would be wise to check figures purporting to show an increase in national income by comparing the physical quantities of output in the periods concerned. It may be that the same amount per capita was produced, but that prices rose, thus giving a deceptive appearance of progress. All these qualifications are necessary lest we become confused in studying the relations between different periods or types of production.

To express comparisons graphically, economists often avoid absolute figures and use percentages instead. They will take a given period as a base and express other periods as percentage points of the base. This practice involves the use of index numbers. Index numbers are a useful shortcut for presenting information, provided it is clearly understood how they are formed. If a student reads that the 1945 index of production is 145, it is important to know the base year and the type of measurement used. It may be a measure of physical output or of money value. The latter may or may not be corrected to allow for general rises or declines in prices. Reputable writers will make these facts clear, but pleaders for special causes and propagandists may deceive by obscuring such important qualifications. Such misuse of statistics causes many untrained persons to distrust figures completely.

The general laws of production are naturally affected by the special qualities of the separate factors. Thus, natural resources are relatively fixed in quantity. Land is immobile, and, in a sense, indestructible. By contrast, labor and capital are capable of expansion and mobility. The expansion of labor through population growth is slow, while growth in capital could be more flexible. Capital, in the money sense, and labor, physically speaking, are quite mobile. Machinery and factories, however, are not easily moved, nor does labor readily transfer from one region to another. All these characteristics are bound to affect the proportion of the factors used and to determine the details of the productive process. In view of this fact, it may be useful to consider in a more specific manner the several elements of production.

#### NATURAL RESOURCES

The bounties of nature have been unevenly distributed among the nations of the earth. There are rich soils and desert wastes, forest lands and swamps, great deposits of minerals and "have-not" regions, power resources and their absence, all varying from country to country. Among the richest political units are the United States and the Soviet

Union, both possessing within their borders nearly all the materials needed for a complex industrial society. In the United States extensive surveys of resources and plans for their utilization have been made by the government group successively known as the National Resources Board, the National Resources Committee, and the National Resources Planning Board. This group has catalogued the main resources of the nation in a series of reports and brochures. In general, the picture is that of a nation once prodigal of apparently unlimited natural wealth, but now awakening to the need of conservation and planned utilization.

Basic among our resources is land. The land area of the United States is roughly two billion acres, with nearly half of this available as farm land, about equally divided between crops and pasture. The remainder of our land consists of deserts, forests, swamps, and urban regions. From land comes food and the materials for clothing, furniture and building materials, paper, and many of the synthetics such as bakelite and rayon. Recent developments in chemistry have made even second-grade timber useful for plywood and the plastics. Softwoods can be hardened, with the result that our fastest growing trees are available for uses hitherto reserved to the hardwoods. Even inorganic matter is transformed by chemistry into flexible and lustrous textiles, with nylon and spun glass among the marvels of the age. Alcohol made from farm products returns as synthetic tires on the wheels of tractors. Thus, in many ways an inexhaustible gift of nature becomes the raw material for the most diverse industries.

Beneath the surface of the earth lies the rich kingdom of minerals. Among these are the metals, with iron as leader, which are so vital for machine and skyscraper alike. Copper, lead, zinc, bauxite for aluminum, magnesium, to say nothing of such valuable alloy metals as tungsten, manganese, vanadium, and chromium are available to some degree in the United States. We have relative abundance of the great fuel sources of coal and oil, although the latter product is being used so rapidly that reserves might easily be depleted. Coal is at the same time the source of scores of valuable by-products, including the famous coal tar dyes. It can be used to generate electricity or to make synthetic gasoline. Power can likewise be had from our plentiful water

<sup>&</sup>lt;sup>1</sup> Among the major publications are the various surveys of state planning released in 1935, 1936, and 1938; and of city and regional planning issued in 1937, 1938, and 1942; their general report for 1942; their special reports entitled *Industrial Location and National Resources* (1942); Energy Resources and National Policy (1939), Development of Resources and Stabilization of Employment in the United States (1941); and The Structure of the American Economy (1939). These documents are rich in research material.

resources. Some streams are most useful for navigation, others for hydroelectric developments, while several can be used in both ways. Thus, coal and water are the giants which furnish energy for industry, transportation, and commerce. Yet, some of these resources are limited. Even our huge reserves of iron ore were heavily depleted by the Second World War. Military prindence, to say nothing of sound economics, would counsel the importation of potentially scarce materials in return for the products of our farms and factories.

The economic implications of the possession of raw materials are great. Control over these essential resources gives virtually unlimited power. Great fortunes have been made from lands bought for a mere trifle during the early years of our nation. Dominance over natural resources can be a source of monopoly, while wasteful exploitation may involve the squandering of an essential heritage. It is going too far to assert that the causes of war are basically economic, yet it is interesting to study the economic factors in recent wars. The great imperialist drives of the nineteenth century were struggles for resources. More recently, the Axis powers clanned that they were driven to war in the effort to gain "living room" from the "have" nations. Without conceding the validity of their argument, it is easy to see how an industrial nation must have access to materials through world trade, or it will seek such access by force. Truly the ownership and use of the resources of nature constitute a vital factor in the economic process.

#### ENTERPRISE, TECHNOLOGY, AND MANAGEMENT

Natural resources in their undeveloped form are rarely of immediate use to the world. The potential riches of Northern Canada, Alaska, Siberia, China, and parts of South America and Africa do not as yet contribute greatly to the wealth of mankind. Some of these riches are not tapped because of transportation problems, but in other cases it is simply because no enterpriser has seen fit to develop them. It is the risk-taker, the captain of industry, who acquires funds and organizes production so that potential wealth becomes readily available. Originally he was the genius who discovered new possibilities, the manager who directed their production, and the salesman who convinced others of their value. Today he is likely to have a corps of specialized assistants who perform these tasks, but his is the ultimate responsibility for their success or failure. It is enlightening to note in detail how enterprise functions in modern economic life.

The first step in enterprise is the *promotion* of a new venture. Such promoters may be persons of modest means who see an opportunity for

a new garage, a barber who decides to open his own shop, or a returned soldier who feels he can manage a restaurant. On the other hand, they may be wealthy men who listen to the stories of inventors or researchers and decide to take a chance. They may be professional financiers who feel they can reorganize and expand some sick firms. Still more likely, they are executives of great corporations, studying the reports of trained scientists and engineers, and embarking upon television, air conditioning, or the family air plane. Some risk their own funds, but more often they will call upon the extensive sources of funds to be described in a subsequent chapter. If they succeed, their names may become by-words, as are the names of Edison or Ford. But many fail in the attempt. It is precisely this risk that both taxes their ingenuity and entitles them to a suitable reward when they win out.

Important for enterprise today is technology. The scientist in the laboratory and the inventor tinkering in his cellar contribute that flash of genius which leads to progress. Six great modern industries based upon the telephone, the automobile, the motion picture, radio, and synthetics are a tribute to the work of the technician. New improvements in the mechanical cotton picker may change the entire economy of the South. Both the synthetics and electronics appear to have extensive possibilities. The most significant development in modern technology is the fact that research is organized and extensive. Many of the great industries spend millions for scientific development, with General Electric going so far as to subsidize pure science without having demanded immediate practical results from Steinmitz and his colleagues. The Du Ponts are particularly noted for corporate research. Nylon is not only a great discovery, but it is indicative of an important trend towards "tailor-made" products. Industry is trying to improve on nature. Substitute is no longer of necessity an opprobrious term. In rubber, for example, heat-proof, oil-resistant synthetics perform certain operations better than the natural product. It would be interesting in this connection to read through a year's advertisements in Fortune magazine. Here a student will find technology dramatized." In addition to private research, many government agencies, such as the Bureau of Standards and the Department of Agriculture, carry on intensive investigation programs.

<sup>&</sup>lt;sup>3</sup> An important document on technology is the National Resources Committee's Technological Trends and National Policy (1937). Government documents of this type can be purchased from the Superintendent of Documents, Washington 25, D C., and are available in most large libraries. Much of this material is summarized in S. M. and L. Rosen, Technology and Society (Macmillan). See also E. L. Bogait and C. E. Landon, Modern Industry (Longmans), ch. 28

Another important phase of enterprise is management. Management directs the organization and operation of a firm. As far as circumstances permit, it determines upon location of plants, with due regard to availability of materials, transportation, labor, and markets. It also decides upon the type of operation and upon specialization. Thus, a firm could not only manufacture a finished product, but it could also develop raw materials and accessories. Ford has succeeded in this form of so-called vertical organization in automobiles, making not only the car itself, but the steel and synthetics for its parts. Ceneral Motors, on the other hand, purchases many of its raw materials and decentralizes operations through semiautonomous subsidiary firms. In general, the trend in industry is towards increased specialization, with each firm manufacturing a single product or series of related products, such as iron and steel, tires, cans or glass containers for food, and the like. Such concentration of activity makes for increased interdependence in the modern economy, with the result that a disruption caused by a catastrophe, strike, or depression can spread rapidly throughout the entire system. Specialization also fosters mass production, since the simplification of operations permits the greater use of machinery and assembly lines. All this in turn adds to the complexity of management, for such gigantic operations must be synchronized perfectly to have efficient operation. Materials must be available in proper quantities at the right time, parts must be at hand in adequate numbers to permit uninterrupted operation of the assembly line, and the finished product must be removed rapidly to avoid congestion. An excess of materials would cause storage problems and a lack would paralyze the entire process. Skill and experience are required to plan large-scale operations.

Management today is attempting to apply scientific principles to the utilization of labor. The pioneer in this field was Frederick W. Taylor, who improved upon the hit-or-miss policies of the nineteenth century. He advocated better working conditions and careful time and motion studies of each job. With such analyses, new employees can be instructed more carefully. This information also provides a basis for incentive payment plans. A somewhat similar process is the application of psychology to industrial relations methods and the schooling of foremen in the intelligent use of authority. Aptitude studies fit workers to the proper jobs. Division of labor permits each worker to learn one task thoroughly and perform it efficiently. Thus, the law of comparative advantage, whereby each concentrates upon his best skills, is applied to industry. Just as the executive would be foolish to do his own typing, so likewise it is a waste for a skilled mechanic to be compelled

to haul materials or clean tools or machines. Skill is gained, time is saved, and machines are used more efficiently by specialization in the use of labor. A striking illustration of the worth of these methods was the immense quantity of war materials turned out by largely unskilled labor in the Second World War. On the other hand, the routine and monotony of such repetitious work often has an adverse effect upon the worker. Even if no positive personality injury is done, there is the absence of the independence, poise, and self-reliance of the skilled craftsman. A first-class mechanic, a competent radio engineer, or a trained printer or bookbinder gains in character and personality from his work. Unless society develops leisure-time compensating activities, through games, civic tasks, union functions, or hobbics, a social problem may develop. Perhaps the industrial unions which parallel mass production industries may be an important factor in offsetting the effects of job routine.<sup>8</sup>

A final phase in enterprise is the marketing of the product. This involves selling and all its subsidiary functions. For most products demand must be created, at least for the specific brand. This is done by advertising and salesmanship. Credit and instalment finance techniques make purchasing easy. Brokerage, wholesale, and retail outlets must be acquired for the transportation and disposition of the article. Storage is often necessary. In many products, standards and grades must be set. For others, service facilities are required. Some industries integrate the functions of production and marketing, as when automobile firms have regular dealers and their own finance corporations. Typewriter and radio companies likewise often have local representatives for sales and service. In other cases, marketing is largely done by independent groups, with the primary producer content to sell to large jobbers. It is even possible that the factory be little more than an agent for large distribution groups, such as chain stores, mail-order houses or large department stores. At times such mass purchasers have their own private brands, often identical with goods nationally advertised under standard brands. These several techniques of marketing are important concomitants of mass production, for only a mass market can justify large-scale industrial establishments.1

<sup>8</sup> On management, cf. E. G. Anderson and G T Schwenning, The Science of Production Organization (Wiley); F. W. Taylor, Principles of Scientific Management (Harper); and E. Bogart and C. E. Landon, op cit., chs. 3-9, 27-28

<sup>&</sup>lt;sup>4</sup> On marketing, cf. F. L. Vaughan, Marketing (Farrar); F. E. and C. P. Clark, Principles of Marketing (Macmillan); C. F. Philips, Marketing (Houghton); R. S. Alexander and others, Marketing (Ginn) and C. W. Barker and M. Anshen, Modern Marketing (McGraw-Hill).

#### MACHINES AND MEN

It was stated that enterprise organizes men, machines, and materials into a complex productive process. Today labor is frequently applied directly to land or material to turn out a finished product. More characteristic of modern economic life is what is termed roundabout production. This involves the use of labor to make tools and machines which will give a much larger output. The farmer who, instead of carrying water in buckets from a stream, takes a few days off to build a conduit to his home affords a primitive illustration of this process. By spending some extra time in developing a capital instrument, he saves labor in the long run. Man has progressed from the stage of simple tools to intricate machines and giant sources of power, thus multiplying many times the efficiency of his work. Today we have machines which make machines to produce goods for consumption. Unquestionably, capital goods form a major factor in the productive process. As a result the process becomes more lengthy and involved, but immensely more efficient.

The modern machine can perform a high percentage of the productive activities of man, and usually do a much better job. Today practically all of man's senses can be paralleled by mechanical, chemical, or electrical devices which are both nutting and often more accurate than the human body. Thus, the photoelectric cell can judge the color of textiles more surely than the eye, spot imperfections in paper, tell when steel has reached the proper degree of redness in reheating furnaces, detect smoke, and otherwise replace workers as observers in industry. If necessary, industry can also have the services of an "electric ear" which can sift and sort sounds. Man's ability to gauge temperatme, pressure, weight, form, and size is now duplicated and even exceeded by machines. With such devices, delicate adjustments are possible. Parts can easily be made with tolerance of error less than 1/20,000 of an inch. Such uniformity is necessary for mass production and assembly of intricate machinery, but it has become commonplace in American industry. Furthermore, the machine possesses speed in addition to accuracy. Electric motors and new alloys make possible speeds which once would have seemed fantastic. Much production today is done by high speed, semiautomatic or automatic machines. A simple illustration would be ordinary packs of eigarettes, which are rolled, counted, and packed compactly, and scaled in cellophane at

<sup>&</sup>lt;sup>8</sup> It has been estimated that this device alone could replace over 250,000 workers. Cf. Technological Trends and National Policy, p. 323.

a very rapid pace. Machines do not tire. They are fast and accurate. They concenhate immense power in a small space. It is scarcely to be wondered at that this has become an age of machines.

Machines would be useless without power. It was no accident that the greatest development in machinery came after the discovery of the steam engine and subsequently of the internal combustion engine and the electric motor. Man has always shown the ingenuity and skill which today expresses itself in technology. But the genius responsible for the Pyramids or the hanging gardens of Babylon was a giant in fetters. The scientific drawings of Leonardo da Vinci were but dreams in his day. It took power to snap these fetters, steam which supplied the energy of thousands of slaves, giant turbines which in a day did more work than all the fellahin of Egypt could have done in a year, and electricity which added to power the finesse and delicacy of the skilled artisan. Coal, water power, and oil are basic to modern industry. Atomic power may unleash unbelievable stores of energy.

We should not exaggerate the place of the machine in modern production. We do not yet live as did ancient Greece or Rome, with slaves -this time of metal-to do our work while we concentrate on learning and culture. Man, with his energy and skill, is very much a part of the productive process, so much so that the study of population is as much the concern of the economist as the sociologist. The total size of the population and its age composition have much to do with the quantity of the available labor force. In the United States the population is expected to range upwards to 150,000,000, an increase in twenty million from the present level. This growth will come from excess of births over deaths, rather than from immigration, which is virtually nonexistent today. The present working force is estimated at fifty million or over, and should increase as the ratio of adults to children rises. There is considerable controversy over the economic effects of population changes. On the one hand, a growing population is held to add to the danger of large-scale technological unemployment, to be described presently. On the other hand, a declining population might curtail the mass market which is the concomitant of mass production. The truth appears to be that the underlying assumption-that mere quantity of population is a major factor in living standards-is false under current American conditions. Population decrease would not of itself reduce relative technological or cyclical unemployment, nor would increase in numbers necessarily insure a stable mass market. Other factors, to be treated in subsequent chapters, are much more important in solving this problem. If the other conditions for full employment are present, it is likely that we can have an increasing standard

of living, regardless of any predictable population growth. When they are absent, the social problem of poverty and unemployment will remain regardless of efforts to curtail growth in numbers. The entire discussion is an interesting example of the fallacy which constantly crops up in economics, namely, that what appears good for a single individual would be good if all individuals emulated his example. Such is the mistaken attitude of the monopolist, who curtails output to raise prices, of the wasteful exploiter of natural resources, and of the oppressor of labor. Such likewise would be the error of the city dweller, who finds children an economic hability, or the farmer, to whom they are an economic asset, were they to solve the population problem merely by universalizing their special conditions.

The impact of the nuchine on labor has given rise to a major controversy over technological unemployment, or the permanent net displacement of men by machines. There is no question but that technological innovations lead to temporary displacement of labor, but the real difficulty is whether on the whole they create more jobs than they destroy. Allied to this problem for all practical purposes is the similar displacement of workers by other types of efficiency and nationalization, such as the supermarket, the one-man street car or improved office techniques. In all these cases, there is no controversy as to some of the facts. Dial telephones replace operators. Mechanical highway equipment excavates roads, grades the soil, and lays cement faster than could hundreds of laborers. The textile industry is becoming almost completely mechanized, while the radio industry can produce sets with half the labor required in 1929. The continuous automatic steel strip mill meant a ninety-seven per cent reduction in the need for labor. A die can stamp an entire automobile top in one operation. Production per farm worker has steadily increased, while the number of workers has shown a gradual decline. Even in office work, machines are replacing clerks, as the addressograph, calculating machines, and bookkeeping and billing equipment grow in importance. Automatic control systems regulate train movements, and automatic substations, completely unattended, relay electric power. The automatic stoker replaces the fireman in the tending of furnaces, feeding coal which in turn may have been dug by power shovels stripping the surface coal from entire regions.

Displacement is not merely a matter of machinery. Improved processes may lead to greater durability and consequently fewer replacements. Metal outlasts wood, and the modern rayon or nylon cord automobile tire has a long life expectancy. Welding is more economical than riveting and requires less labor; in fact, spot welding can even be

done by machine in some cases. Increased speed of operations can also be a factor in displacing workers. If further details are sought, one could consult the 1300 pages of hearings and exhibits by the Temporary National Economic Committee entitled Technology and Concentration of Economic Power or its monograph Technology in Our Economy. All this, however, is professedly but one side of the picture. Statistics could be given, in many of the industries where new devices have displaced workers, to show that total employment has increased. The same hearings which afforded the illustrations just cited likewise produce scores of instances where machines have cut costs, stepped up output, and consequently occasioned more jobs. The classic example is the automobile industry, which was devastating to the blacksmith, carriage, and stable trade, but which overcompensated by its huge assembly plants, the subsidiary tire and gasoline industries, the stimulation of roadbuilding, the thousands of garages, filling stations, and repair shops, and hundreds of other occupations created by this new development. When the subject is discussed by a battle of illustrations, the result is likely to be a polemic stalemate, with more confusion than enlightenment.

In the attempt to get to the bottom of the matter, economists try to supplement illustrations with analysis. Some of this analysis is theoretical, such as the argument that rationalization leads to lower costs and consequently either lower prices or higher profits or wages. Either alternative will permit consumers to buy more of some goods and consequently stimulate employment. Higher profits could release funds for investment in new industries and new jobs. The crux of the whole problem lies in the fact of expansion. It is not clear that profits could always be used for new investments or additional consumer expenditures. Nor is it certain that any such expansion would be adequate to absorb displaced workers. This question is so important that an entire subsequent chapter is devoted to it.

For the present, it may be enough to present a factual analysis of the problem. Objective study of the facts indicates two distinct and somewhat independent trends in our economy. One is the factor of displacement through technology and efficiency. Average worker productivity in manufacturing has increased at an annual rate of three and one half per cent in the decades between the World Wars. This increase was stepped up during the Second World War in spite of the influx of untrained workers. The other trend is the factor of replacement through economic expansion induced by lower costs and prices and by new industries and occupations. Until recent times, expansion has generally been adequate to counterbalance displacement. Labor

was needed to build the great economic machine of present-day America-first commerce and agriculture, then transportation culminating in the railroad era, next the development of the basic industries, and finally the automobile with all its ramifications. For a good part of this period, the frontier and foreign markets acted as a safety valve for occasional maladjustments. More recently, the expansion of the service industries has provided new opportunities for work. On the other hand, the replacement process has undoubtedly slowed up in recent years, while displacement has accelerated. There was little new investment during the Thirties. Many of the promising discoveries of today require only a few workers, and some may be labor-displacing substitutes for existing materials, such as plastics and synthetics for steel, wood, and cotton. Nothing is known at present which compares to the automobile in its potentialities. Service occupations are not reliable safety valves, since they tend to follow the employment trend of industry rather than compensate for it. Hence it is safe to conclude that technology and rationalization present problems which they do not automatically solve. The only real answer lies in the field of price, investment, and income policies to be treated later.8

There are other important social implications of the machine economy. On the one hand, it has led to comforts and luxuries on an unparalleled scale. On the other hand, it has occasioned concentration into the great industrial cities spawned by large-scale production. Cramped apartments have interfered with family life, while outside attractions such as the motion pictures and the automobile complete the change. The sense of unity and responsibility which is fostered by small communities is not so readily available in the large city. Recently there has been something of a trend towards decentralization, since the automobile, electric power, and possibly the airplane have made both homes and industry less dependent upon the metropolis. Rapid transport, the radio, and even the motion pictures permit many to possess the cultural and recreational advantages of the city, without sacrificing the opportunities for more gracious and less heetic living as afforded in smaller communities.

On this subject, cf. S. Bell, Productivity, Wages, and National Income (Brookings); D. Rockeleller, Unused Resources and Economic Waste (Univ. of Chicago), E. Lederer, Technical Progress and Unemployment (International Labor Office); M. L. Fledderis and M. L. van Kleeck, Technology and Livelihood (Russell Sage); the TNEC and National Resources Committee documents cited in the text, also the WPA factual studies, where available; R. A. Drøn, Economic Institutions and Cultural Change (McGraw-Hill), chs. 18-15; S. M. and L. Rosen, op. cit., chs. 1-11, and E. L. Bogart and C. E. Landon, op. cit., chs. 24-26 On population, cf. P. H. Landis, Population Problems (American Book Co.) and W. S. Thompson, Population Problems (McGraw-Hill).

The machine has issued a diamatic challenge to modern society. Properly used, it could lead to the abolition of poverty and the advent of an "economy of abundance." Several inventorics of our economy have been made in the attempt to discover the potentialities of a full use of our human and material resources. Thus, the Brookings Institution in its noted study, America's Capacity to Produce, estimated that even in our most prosperous year, 1929, we were using only eightv per cent of our immediately available resources. Other estimates have gone considerably higher. Perhaps the most striking indication of our possibilities was the production record during the Second World War. In that period, with eleven million of our best workers withdrawn from the economy and most industries converted to war production, it was still possible to maintain a comfortable level of civilian living. while supplying food and munitions to an unprecedented degree. A comparable peacetime organization of production would afford results which would have seemed visionary a decade ago. Conversely, a low level of output, in view of increased efficiency, could mean unprecedented unemployment. Clearly, however, the authoritarian means necessitated by war do not fit in with the "rules of the game" as accepted in the United States for peacetime. With abundance, employment, and reasonable security as the goal, free enterprise seeks these objectives by observing definite laws and customs. A dynamic cconomy can only move forward. There is no possibility of stopping the process of change while we adjust ourselves to the developments of yesterday. Machine production is here to stay, regardless of the problems it occasions. This is indeed a challenge. If it is not met, profound economic, social, and political adjustments seem inevitable.

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Alderfor and H. E. Michl, Economics of American Industry (McGraw-Hill); F. W. Taylor, Principles of Scientific Management (Harper); F. L. Vaughan, Marketing (Farrar); F. G. Anderson and G. T. Schweming, The Science of Production Organization (Wiley); P. H. Landis, Population Problems (American Book Co.), D. Rocketeller, Unused Resources and Economic Waste (University of Chicago); E. Lederer, Technical Progress and Unemployment (International Labor Office); S. Bell, Productivity, Wages, and National Income (Brookings); and L. Mumford, Technics and Civilization (Harcourt). The Culture of Cities (Harcourt), and The Condition of Man (Harcourt). The government documents cited in the text are invaliable. Outstanding are the National Resources Committee, Technological Trends and National Policy and The Structure of the American Economy, and the Temporary National Economic Committee, Hearings, Part 30, Technology and Concentration of Economic Power and monograph 22, Technology in Our Economy.

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#### THE ENCYCLOPARDIA OF THE SOCIAL SCIENCES

Main articles: Production; Natural Resources, Entrepreneur; Management; Technology; Marketing. Subsidiary articles: Economics; Index Numbers; Organization, Economic; Increasing Returns; Diminishing Returns; Statistics; Exploitation; National Wealth; Conservation; Raw Materials; Physiocrats; Geography, Economic; Land Utilization; Business; Captain of Industry; Promotion; Risk; Business Administration; Executive; Engineering; Science; Invention; Factory System; Industrial Arts; Large Scale Production; Location of Industry; Scientific Management; Taylor, F. W.; Specialization; Efficiency; Division of Labor; Advertising; Retail Trade; Sales; Salesmanship; Wholesaling; Guiding; Market; Instalment Selling; Middleman; Warehousing; Credit; Standardization; Distribution; Storage; Machinery, Industrial; Machines and Tools; Rationalization; Industrialism; Industrial Revolution; Electric Power; Power, Industrial; Rural Industries; Employment; Population; Demography.

## How Business Is Organized

organization of business. The generic term "management" is susceptible of various concrete embodiments, three of which are important in modern economic life. A given productive unit may be owned and managed by an individual, by a group, or by a legal personality. In the first case we have personal proprietorship. The second is known as a partnership, while the third is styled the corporation. Each denotes a different kind of ownership and control, with substantially different rules and policies.

#### THE ORGANIZATION OF SMALL BUSINESS

A sizable percentage of American business is carried on by means of personal proprietorship. Hundreds of thousands of small business men, contractors, grocers, and the like fall under this category. In concerns of this type one man owns the entire business and assumes sole responsibility for its conduct. Because one man has to collect the capital necessary for the enterprise, it is usually small in scope. This fact leads to certain definite advantages, such as centralized responsibility, flexibility, and the possibility of zealous, personal attention to the details of business. The owner usually enjoys direct contacts with his customers and his workers. He is able to change policies quickly when the need arises. Again, he is likely to devote a great deal of attention to work which is so bound up with his own interests. In addition to these administrative advantages, the proprietorship many times enjoys a lower tax rate. Special corporation taxes do not affect it. In fact, state governments, and even the federal government, often pass discriminatory laws against competing forms of organization. They favor widely diffused ownership because of its social implications of stability, initiative, and independence. Nevertheless, there are important drawbacks to the use of the proprietorship method. Debts of such firms are personal habilities of the owner. He may lose all his property because of losses incurred by himself or his agents. Furthermore, the chances that he may founder in the competitive sea are uncomfortably high. He has not the resources of a large corporation. It is usually more difficult for him to raise new funds. Even in running his business, he cannot afford the expert help obtained by the corporations. Many times poor business methods keep him in continual trouble. Unfortunately, many such employers attempt to recoup by "sweating" their workers. Even with good methods, it is difficult for the single owner to compete with larger firms, which enjoy the economies of large-scale production and purchasing, and which possibly use less legitimate methods of competition. As a result of all these factors, personal proprietorship is often a precarious undertaking.

Much small business is carried on through the pattnership, or the joint proprietorship of two or more owners, regulated according to the terms of an oral or written contract. It does not differ in any considerable degree from the single proprietorship. The capital of such firms is larger because of the pooling of the resources of several partners. They are considered safer credit risks masmuch as the debts of the firm are personal liabilities of each of the partners. This latter point, however, is a disadvantage from the viewpoint of the individual partner. He is responsible for the actions of his partners and may suffer great loss through no fault of his own. Furthermore, partnership is relatively unstable. It has to be completely dissolved and a new contract drawn up at the death or withdrawal of any partner. This involves at times difficult questions of valuation and policy. Anything approaching unanimous agreement on policy is frequently hard to obtain. In spite of all these difficulties the cheapness, flexibility, and privacy of this arrangement appeal to many business men. Even the great firm of Morgan used this form of combination.

Analogous to the partnership are the syndicate and the cartel. The syndicate is an *ad hoe* partnership, formed for a specific purpose and dissolved upon its accomplishment. This form is used for spreading the risk of large insurance policies, security issues, and the like. A *cartel* is a special union of various business firms in the effort to obtain common production and sales policies. It usually aims at achieving a virtual monopoly in a product. The individual members of a cartel may belong in any of the three major classes of business organization, although the cartel is normally a syndicate of corporations.

As a rough generalization, it may be said that *sniall-scale business* will be found where flexibility and adaptability are at a premium or where special conditions limit the market. Highly specialized production, such as the making of individually tailored suits and dresses, is usually limited to smaller firms. Many of the services naturally fall

into this category. Barber shops and automobile repair garages are normally small, many of them owned by proprietors or partners. Professional services rarely assume large proportions, although diversity of skills might make the partnership form superior to individual proprietorship. Thus one lawyer might prepare briefs, while his partner argues cases before the courts. A group of doctors might band together into a clinic, where the patient might receive a variety of specialized treatments under the same roof. Of course, even small business might find it advantageous to use the corporate form, because it affords limited liability for the firm's debts.

Large-scale business is indicated where either the physical nature of production demands it or where great economies can be effected by its use. Thus, the sheer size or complexity of certain goods, such as locomotives, steam cranes or ocean-going vessels call for gigantic installations. One could hardly imagine a small group of craftsmen organizing to build a battleship. On the other hand, even where small plants could turn out a product, there are important savings which can be had through the use of large-scale methods, provided only that a mass market is available. A large firm can get raw materials more cheaply, because it takes less time and trouble to handle one big order than it would to ship the same amount in a hundred smaller lots. For the same reason it finds it easier to sell its securities when it needs funds. It pays less for its money as a rule, since its credit standing is well known. In the productive process, it can use the techniques of specialization, division of labor, and machine production, described in the preceding chapter. Likewise it can afford research, utilization of high-class executive personnel, and other such characteristics of progressive business. It can also indulge in expensive advertising campaigns to capture the market. Many times extensive operations permit the development of by-products and side lines, which would be too expensive for a small firm. A classic example is the use of some of the by-products of meat packing in the pharmaceutical industries, for various endocrine extracts. It would not pay a small abattoir to collect various glands, yet such a process affords a sizable profit to the larger companies. As a result of all these advantages, large plants and various combinations of plants and industries are playing an increasing role in our economy.

Extension of business operations naturally cannot go on indefinitely. Sheer size and complexity have their attendant disadvantages, which can go far to nullify economies in purchasing, production, and marketing. A certain amount of inflexibility and even bureaucracy necessarily accompany bigness, wherever it is found. The loss of personal contact

and evaluation often is serious. Consequently smaller businesses survive and even thrive. Thus, the so-called "Little Steel" firms have successfully challenged the United States Steel Corporation, although they could hardly be called small business. Some recent studies have indicated that medium-sized business often has lower costs and higher earnings than the largest firms. Such conclusions are not surprising, simply because the human mind is bound to be overwhelmed by excessive complexity

#### THE ORGANIZATION OF LARGE BUSINESS

Neither the proprietorship nor the partnership form was adequate for the needs of large-scale industry, finance, commerce, mining, transportation and communication, and electrical production. Mass production, rapidly enlarging markets, and quicker transportation all called for greater aggregations of capital than either an individual or a small group could supply. The savings of a nation were needed to build up the industrial empires of today. A new type of commercial knowledge and skill and a vastly changed quality of administrative ability were also called for. The solution of this problem was found in the creation of the industrial corporation, a group of persons organized for a definite business under a charter secured from the state, considered as a legal personage with a right to sue and be sued, enjoying perpetuity, possessing liability limited to the amount of capitalization indicated in the aforesaid charter, and doing business through a board of directors elected by the stock members of the aforesaid corporation. By means of this device, thousands of persons were enabled to buy and sell, contract debts and enter into agreements, as if they were a single individual. This "person" exists only by the fiat of the sovereign state. By its leave a promoter desirous of raising a larger sum of money than could be obtained by any other method, or wishing to obtain some of

<sup>&</sup>lt;sup>1</sup> On this point, cf. W. L. Crum, Corporate Size and Earning Power (Harvard); A. L. Bennhem and others, How Profitable Is Big Business (Twentieth Century Fund); and Temporary National Economic Committee monographs 13, Relative Efficiency of Large, Medium-Sized, and Small Business, and 15, Financial Characteristics of American Manufacturing Corporations. The authors of these two TNEC monographs disagree in their conclusions, the latter (p. 23) holding for a direct correlation between size and earnings, while the former (p. 14) maintains that medium-sized business is more efficient than large. The reason for the uncertainty lies in the absence of complete and reliable statistics. Monograph 17, Problems of Small Business, also has much useful data on the subject of smaller firms. For a searching, it somewhat partisan, critique of the TNEC monographs, see J. Scoville and N. Sargent, Fact and Fancy in the TNEC Monographs (National Association of Manufacturers).

the privileges of a corporation, files with any of the states of the Union an application for a charter. (There are also a number of federal corporations for governmental or semigovernmental agencies, found by an act of Congress.) He determines to issue a certain number of shares of ownership (stocks) and certificates of indebteduess (bonds). These are sold to the investing public, to banks, or to similar institutions, and thus the necessary capital is accumulated. The corporation can now function in accordance with the requirements of its charter.

The stockholders are the owners of the corporation and are supposed to determine its policies. For this purpose a board of directors is elected democratically, with each share of stock normally being entitled to one vote. These directors in their turn select the executive officers of the corporation and define its basic policies. They issue reports to the stockholders, decide as to the distribution of profits, and otherwise act as agents of the majority. Thus a very large number of investors are enabled to pool their funds and yet obtain a unity of policy and a centralization of responsibility which would be unthinkable in a partnership of that size.

The bondholders are creditors of a firm. They have lent to, not invested in, the corporation. Accordingly, their primary claim is the right to interest on their investment. This claim is a definite item of expense which must be met before profits can be paid to the stockholders. Should the corporation default in its interest payments, the bondholders have the right as creditors to file a petition in bankruptcy. Frequently their title is similar to that of a mortgageholder, giving them a direct lien upon the assets of the company. At times, in bankruptcy, they assume the voting privileges of stockholders, with rights superior to those of the existing stockholders. However, they have little control over a normal firm which is regularly paying its interest. Only in the case of grave abuses which threaten to destroy the basic assets securing their loan may they interfere in the direction of a company. In such a case they file a prayer for relief before a court of equity, alleging that irreparable harm to their interests will result unless the court intervenes and upsets the arrangements in question. Since courts of equity have broad powers to supersede contracts and even laws which violate justice, the bondholder has some assurance that his rights will not be flagrantly violated.

There are many hybrid types of securities which give the possessor some of the powers of a stockholder and some of a bondholder. The best-known illustration of this arrangement is found in "preferred stock." This stock is distinguished from normal or common stock in that it enjoys a prior claim to any profits remaining after the bond-

holders have been paid interest. This profit is usually limited to about seven per cent of the face value of the stock. At times this obligation is cumulative, carrying over from year to year in the event of nonpayment. Thus the preferred stockholders enjoy something of the security of the bondholder. Since, however, they take a greater risk of receiving no profits, and even losing their equity (ownership) entirely, they usually receive a higher rate of interest. On the other hand, they do not always receive the voting powers of ownership. In recent years the powers of the various types of investors have been interchanged and shifted to a considerable degree. Thus there have been issued nonvoting common stock, bonds convertible into stock, preferred stock with voting privileges, different classes of common stock with unequal rights and voting powers, and numerous other variations upon the basic forms. Accordingly, while in general most stocks and bonds fall under the traditional classifications, the modern investor usually examines with care the precise powers and rights which he receives for his money.

Many advantages follow from the intricate legal arrangements of the corporation. The primary advantage has been mentioned before, namely, the facilitating of capital accumulation. A corporation is able to raise sums of money which could not be obtained through any devices available for proprietors or partners. Through its facilities, consolidations and mergers are easily effected. In addition, the owners of a corporation enjoy a second advantage which is nearly as valuable as the first, their limited liability. Stockholders are not personally liable for the debts of their firm, as are proprietors and partners. If the corporation goes bankrupt, the investor loses only the value of his stock. In exceptional cases, as with some bankstock, he is liable to an additional assessment, but even this is limited in amount. Furthermore, these shares of ownership are usually liquid. They are constantly being bought and sold in the various stock exchanges or over-the-counter markets of the country. At any moment the stockholder or boudholder may withdraw his investment or loan at its currently appraised value. His money is not ned up for long periods as it is in other forms of investment, such as real estate, where sale is possible only at certain favorable times. Again, a large corporation is relatively stable. It frequently outlives the various individuals who invest in it. The death or withdrawal of any of its owners usually does not affect it to a considerable degree. As a result, one of the elements of risk in a partnership does not attach to the corporation. Finally, the corporation permits of centralization of executive responsibility. Although possessing thousands of owners, it achieves unity of policy and control. Furthermore, through the holding company device, whereby subsidiary groups maintain a separate corporate being, as much decentralization as is desired can be achieved without sacrificing the unity of the whole.3

# SEPARATION OF OWNERSHIP AND CONTROL IN THE CORPORATION

An important phenomenon in regard to the modern corporation is the separation of ownership and control. This development was studied in detail by A. A. Berle and G. C. Means in one of the more important social documents of our day, The Modern Corporation and Private Property (Macmillan). They use this title to identify the several processes whereby the stockholder is deprived of all actual control of his corporation, although retaining his nominal claim of ownership. In the modern world, it frequently happens that large corporations are controlled not by their legal owners but rather by some inner group, with the result that the vast majority of stockholders are virtually disfranchised. The study of how this is brought about, and what consequences ensue from its prevalence, is at once enlightening and of compelling importance.

The separation of ownership and control derives fundamentally from the fact that a majority of the stock voted in an annual meeting can elect the directors of a corporation. Consequently, the minority group of voters has no direct voice in the affairs of the company. It is true that in case of grave abuse, they may have recourse to the courts, but this is an expensive and risky procedure. It is cheaper and safer to sell one's holding, especially since the courts have been lenient at times in their definitions of executive responsibility and of mismanagement and fraud. Accordingly, for all practical purposes the minority of shareholders has little possibility of influencing the affairs of their corporation.

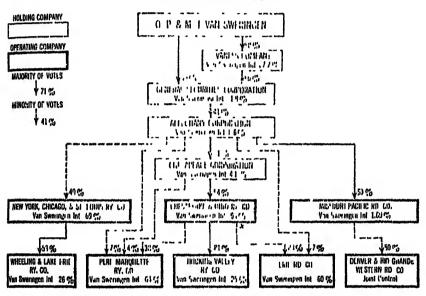
Majority rule, nevertheless, is an accepted custom in America. The incidental inconveniences to minorities are considered to be the necessary price of democracy. In corporate practice, however, the crux of the situation lies in the fact that majority control can often be achieved without an investment greater than that of the disfranchised minority. In a few cases actual majority ownership is achieved, but these cases are rare enough to be disregarded. (Less than six per cent of the two hundred largest corporations belong in the class of strict majority domination.) More important then are the two basic methods of gain-

<sup>&</sup>lt;sup>2</sup> On the corporation and its relation to other forms of business, cf. C. Crumbaker, Organizing and Financing Modern Business (Wiley), chs. 1–12, and H. C. Guthmann and H. E. Dougall, Corporate Financial Policy (Prentice-Hall), chs. 1–10.

ing control without proportionate ownership, namely, the use of a legal device, and the elever utilization of a factual situation.

There are many legal decrees whereby control may be obtained at relatively little cost. The best known device is the holding company, a corporation which controls another through stock ownership. Thus, a holding company can control a 100,000 dollar firm by owning 51,000 dollars' worth of its stock. The control behind the holding company can dominate it in turn by owning a majority of its stock at a cost

### MAJOR ELEMENTS IN THE CONTROL OF THE VAN SWERINGEN SYSTEM OF RAILROADS



\* As of April 30, 1930

\* Held wa Virginia Transportation Co. which was 100% cwnod by Chesipeale & Ohio Ry. Co.

FIGURE 1. A TYPICAL HOLDING COMPANY

of 26,000 dollars. By forming a secondary holding company, which owns a majority control in the first, the ultimate power can be secured with 14,000 dollars. In theory, this chain may be carried on indefinitely until a few hondred dollars controls millions. Practically, the limit of pyramiding is reached when the public will no longer trust the promoter with its money without more seemity than common stock ownership. Sooner or later bonds or preferred stock must be issued, and this often proves to be the undoing of elaborate chains. Nevertheless, the Van Sweringen brothers were able to use this means for obtaining control of two billion dollars' worth of railroad properties with an in-

vestment of twenty million dollars. This method has also been used extensively in the electrical utility field. Thus, Harrison Williams was alleged, by the use of this device, stock market manipulation, and corporate legerdemain, to have increased the value of a two million dollar investment to 680 millions. The holding company was an important factor in the Insull collapse. At present its use is somewhat limited by the Public Utility Holding Company Act, which makes provisions for eliminating unnecessary holding companies. Steps have also been taken to prevent abuses in other lines of business as well. For example, the Banking Act of 1933 does much to forestall the evil effects of pyramiding and evasion in the field of banking. The Interstate Commerce Commission has requested special legislation enabling it to control railroad holding companies. Only in the industrial field does the holding company escape direct regulation. Nevertheless, the antitrust laws and the laws regulating security issuance and trading do much to prevent abuses in this field. None of these regulatory laws, however, touches directly the question of separation of ownership and control. They do not forbid the holding company, as such. While it is true that by preventing abuse they remove some of the incentives for its formation, they do not affect its great advantage of allowing extensive economic power to be gotten at a relatively small cost.

Other legal devices utilize various means for neutralizing the voting power of the investing public. One method is the issuance of nonvoting stock. Thus when Dodge Brothers was reorganized in 1925, four fifths of the common stock was disfranchised. Control of the remainder was obtained by the investment bankers who reorganized the company, that is, by the firm of Dillon, Read & Co. By keeping 2.2 million dollars' worth of Class B stock they were able to control a 130 million dollar corporation.3 Another method involves the issuance of different classes of stock, with the cheaper stock having disproportionate voting power. Thus, in 1929 a holding company, the Cities Service Company, issued a special class of preferred stock to H. L. Doherty and Company. This stock, at one dollar a share, had twenty times the voting power of common stock costing as much as sixty-eight dollars a share. By this method a million dollar stock ownership exercised actual control over a billion dollars in corporate assets. An even more complete, though voluntary, disfranchisement occurs in the voting trust. This involves the creation of a group of trustces who are

<sup>&</sup>lt;sup>3</sup> The details of these expedients may be found in A. A. Beile and G. C. Means, op. cit., pp. 72 ff., oi, in a nontechnical fashion, in an excellent work, F. L. Allen, The Lords of Creation, p. 254 and passim. Cf. H. C. Guthmann and H. E. Dougall, op. cit., chs. 4, 25, 30.

given the power to vote all the stock placed in trust with them. An example of this is found in the (then) ninety million dollar Pennroad Corporation, which held valuable railroad properties by the device of letting the Pennsylvania Railroad management vote the stock, and giving investors the chance of buving only voting trust certificates. For this act of trust in the management, they received dividends when they were distributed, but they exercised no control on the policies of the underlying corporations

The use of these legal devices is not infrequent. Of the two hundred largest corporations, twenty-two per cent were controlled in this manner in 1931. Particular forms and devices vary from time to time, but the general effect is achieved frequently enough to warrant the study given to it.

The second broad method for separating ownership and control involves the elever use of factual situations. The usual basis for this type of separation is the fact that widely scattered stockholders can rarely if ever unite in a concerted plan of action. As a rule the stockholder is ignorant of the names of his fellow owners. He would have no practical way of organizing a real party to press an effective program in a stockholders' meeting. Accordingly, properly placed insiders can utilize the apathy of the mass of stockholders to gain control of a company. When the inside group has an appreciable equity in the firm, the resultant control is labeled minority control. When the control has only a negligible stock interest, then it is called management control. The first method is based on the theory that a large single interest can outvote scattered groups in the annual meeting. In case of disputes, this interest can serve as a rallying point for the individual stockholders. The second method depends upon the power of the management to send out calls for the annual meeting, to nonmate a board of directors, and to solicit the votes (provies) of the various security holders. They usually receive enough provies for their use to enable them to continue their control without difficulty. It may sometimes happen that a management revolts against a minority control, and then a battle for proxies begins. An example of this was found in the case of the Standard Oil Company of Indiana. Mr. John D. Rockefeller, Jr., had minority control with fifteen per cent of the stock. In 1929, when he tried to oust the management because of certain questionable transactions, he found that it was prepared to fight him. As election time approached it refused him the proxy machinery. Rockefeller countered with a tremendous publicity campaign in quest of proxies. For a long while the issue was in doubt, but finally the great power of Rockefeller won him sixty-five per cent of the votes cast in the election. Probably only

Rockefeller could have maintained minority control with so small an equity. In giant corporations it is much more likely that management control will prevail. In many of these groups, the largest stockholder owns less than one per cent of the outstanding stock. It frequently happens that few of the officers or directors appear in the list of the twenty largest stockholders! In this way thousands of stockholders are disfranchised as completely, and usually as permanently, as if actual majority ownership was enjoyed by the management or control. A board of directors can retain its power for an indefinite period because it controls the voting machinery. As a result of this factual situation, in the two hundred largest corporations fourteen per cent are controlled by minority interests, and fifty-eight per cent by management.

The phenomenon of the separation of ownership and control does not rest entirely on the factual situation of stockholder apathy. There is a broad legal basis for corporate irresponsibility, created equally by the state legislatures and the courts. In the matter of corporation charters several of the states have competed in laxity. Partly to gain the profits which spring from incorporation fees and from corporation income taxes, partly because a particular state is controlled by wealthy interests (as Delaware is dominated by the Du Ponts), these jurisdictions have relaxed the legal protections given to investors and allowed the directors of a corporation almost despotic sway over its affairs. So broad are the powers granted in some charters that it was facetiously suggested that in order to nullify the veto power of the Supreme Court, the President might incorporate the nation under the laws of Delaware.4 Nor have the courts fought successfully against legislative relaxation. With a broad consistency they have so defined a director's obligation to the stockholders that the latter have frequently been helpless to prevent abuses. "Mismanagement" has been construed very nairowly, with the result that fraud and deception obvious to the lay mind have been allowed to pass without punishment. At times courts of equity have disallowed abuses permitted by law and charter, but the net result of corporate litigation has been a sharp increase in the power of boards of directors and a more thorough disfranchisement of the stockholders.

The results of this phenomenon are of great importance. Much of the "high finance" of the 1920's was made possible by the irresponsibility of corporate controls. By the use of these devices the assets of giant

<sup>&</sup>lt;sup>4</sup> For details of these powers, see A. A. Beile and G. C. Means, op. cit, Book II, or F. L. Allen, op. cit., pp. 254–257. For data on actual ownership of stocks, cf. TNEC monograph 29, Distribution of Ownership in the 200 Largest Nonfinancial Corporations.

corporations were available as pawns in the struggle for domination. Their wealth could be used for inflating the stock market to feverish heights. The power and the knowledge gained by the insiders who controlled the great corporations were liable to great abuse when they could be converted into a sizable meome by security speculation. It was largely as a result of these forces that the 1929 boom assumed its peculiar characteristics. They are in truth responsible in great part for the debacle of the 1930's, which shook the foundations of American economic life. Accordingly, the interplay of these forces is of more than ordinary importance to the student of social problems.

## THE IMPORTANCE OF THE CORPORATION

The implications of concentrated control of corporations nominally directed by nearly ten million stockholders are more fully realized when the position of the corporation in modern business is studied. Corporate business is dominant in the modern economic world. In certain types of activity, such as mining, manufacturing, transportation, public utilities, and related interests, it controls the field to the virtual exclusion of partnerships and individual enterprises. In other branches of economic activity it is not so well entrenched. The corporation is not prominent in the world of agriculture, nor has it the pre-eminence in the field of retail distribution which it enjoys in the realm of manufacturing. When the entire picture of business activity is surveyed, it is found that about two thirds of this field is under corporate control. Statistics, however, may be deceptive in this regard. Corporate business enjoys a power out of proportion even to its major share of business activity. There are three reasons for this exceptional power: the controlling position of corporate enterprise, the concentration of this control into the hands of a few large corporations, and the prevailing tendency in the direction of increased concentration.

That corporate business is overwhelmingly powerful today can be seen from a simple enumeration of the branches of activity in which corporations control about ninety per cent of the field, namely, mining, manufacturing, communication and transportation, and public utilities. These industries have a strategic importance which is not apparent when they are listed as mere percentages of the national wealth. They dominate the flow of the goods which are the primary form of wealth. Retailers on the one hand and individual producers, such as the farmer, on the other hand, must buy and sell according to their terms. The millions who render the several services which are so important today are in their turn dependent on the giant industries which produce the

necessities of life. Any effort on the part of the corporation to curtail production, to fix prices, or otherwise interfere with the free flow of goods, means a lowered standard of living for the community. Practically all goods must pass through the corporate bottleneck, so that corporation policy is national business policy.

# IMPORTANCE OF CORPORATE ACTIVITY BY BRANCHES OF INDUSTRY, 1937 5

Industry	PER CENT OF NATIONAL INCOME	PER CENT OF BUSINESS DONE BY CORPORATIONS
Agriculture	8.9	7
Mining	2.1	96
Electric light and power and manufactured		
gas	1.6	100
Manufacturing	24.0	92
Contract construction	2.1	36
Transportation	7.3	89
Communication	1.3	100
Trade	12.5	58
Finance	9.3	84
Government-including work relief wages	13.5	58
Service	11.9	30
Miscellaneous	4.2	33

## IMPORTANCE OF CHAIN STORE SALES BY SELECTED TYPES OF OUTLETS, 1935 5

KIND OF BUSINESS	Total Sales (in Millions)	Percentage of Sales by Chains
Variety stores	\$781	90.8
Shoe stores	511	50.0
Grocery stores	2,203	38.2
Drug stores with fountain	950	28.8
Restaurants and cating places	1,667	14.5
Hardware store and implement dealers	759	4.3
Drinking places	724	0.1

The broad statement that corporate business is predominant in American economic life does not convey a complete picture. Since there are nearly 600,000 corporations in the United States today, it would seem to be impossible that they should unite to achieve the economic control made possible by their strategic position. A more

<sup>&</sup>lt;sup>5</sup> Bureau of Foreign and Domestic Commerce.

careful study of the situation, however, reveals an omnous degree of concentrated control. In 1933, the six hundred largest corporations. with assets of fifty million dollars or over, owned fifty-three per cent of all corporate wealth. In contrast to this, the 211,586 corporations with assets under 50,000 dollars owned but 1.4 per cent of all corporate wealth. Thus a group of large corporations, less than one seventh of one per cent of the total by number, owned over half the corporate wealth; while the small corporations, over half of the total, owned but one and one half per cent of the corporate wealth. The same concentration is noted in corporate income received in that year. The sixtynine large corporations whose income was over five million dollars were but 0.06 per cent of the total number of corporations making a net most, but received thirty per cent of all corporate profits. At the other extreme the small conporations received a negligible income. These conclusions, based on the Twentieth Century Fund's studies on "Big Business," are confirmed by an earlier study of the two hundred largest nonbanking corporations, possessing assets of unity million dollars or more. These firms are found by A. A. Berle and G. C. Means in their masterly study, The Modern Corporation and Private Property, to control nearly half of the nonbanking corporate assets, almost forty per cent of business assets, and nearly a quarter of the total national wealth. Thus it is apparent that many of the strategic advantages of corporate wealth are concentrated largely in a few hundred corporations. These giants wield immense power and exercise considerable influence over the smaller groups by the very fact of their size. They have free access to the financial markets; they dominate over the broad avenues of distribution; they even confront the majesty of the sovereign state and bargain on terms of equality. To a very large extent corporate pre-eminence in the key fields of economic activity means narrowly concentrated control of basic economic life.

The control exercised by the large corporation is increasing rapidly. The analyses by Berle and Means, and by the Twentieth Century Fund, indicate that there has been a constant trend in that direction. In recent years, especially, the larger groups have been growing two or three times as fast as their smaller rivals. It is difficult to present in a summary form the data available, since the amount of material gathered has been overwhelming. Thus, in 1939 the National Resources Committee, in its study The Structure of the American Economy, endeavored to bring the Berle and Means statistics up to date, and found that concentration was increasing. The Temporary National Economic Committee devoted a large percentage of its hearings and stud-

<sup>&</sup>lt;sup>6</sup>Op. cit , pp. 109, 273.

ies to the problem, reaching the same conclusion. While some of the TNEC reports have been impugned as tendentious, the monographs dealing with this question are among its best. A trenchant expression of the extent to which corporate wealth can go is contained in the comparison between corporate assets and the wealth of the states of the Union:

It will be observed that there are only ten sovereign states which have within their respective borders property valued at more than the assets of either the Metropolitan Life Insurance Company or the American Telegraph and Telephone Company. Stated another way, each of these two corporations is richer than any one of thirty-eight sovereign states. At the other end of the scale there are eighteen states, the taxable wealth of each of which is less than the total assets of the smallest of the thirty "billion dollar" corporations. Of these eighteen states which rank so low among the sisterhood in property values and far below the smallest of the billion dollar giants, some have been particularly active in creating interstate corporations, large and small, to carry on this national commerce upon which the economic life of the nation depends, although none of the states has the constitutional power to regulate the activities of the artificial agencies they launch upon the sea of national commerce.

In this dramatic manner, the sheer immensity of corporate wealth is portrayed.

The allusion to life insurance companies and their wealth is particularly pertinent. The total assets of the 366 legal reserve life insurance companies in 1938 was over twenty-eight billion dollars, with fifteen billion of this held by the five largest. With annual collections of over five billion, they have purchased from one half to two thirds of all publicly offered corporate bonds or notes during the Thirties. They hold about one eighth of all long-term bonds and nearly a fifth of all public utility bonds. Their funds represent from one half to two thirds of the entire annual savings of individuals in the nation. There is no question, of course, of the soundness of these firms from the viewpoint of actuatial reserves, but they do constitute both an instance and a problem of concentrated economic power. They afford almost ideal examples of self-perpetuating management independent of the control

<sup>&</sup>lt;sup>7</sup> Cf. especially monographs 27, The Structure of Industry, and 21, Competition and Monopoly in American Industry, chs. 3-5. Some additional material is given in monograph 20, Taxation, Recovery, and Defense, p. 318. The entire thesis is summarized in the Final Report of the Executive Secretary, ch. 2

<sup>&</sup>lt;sup>8</sup> Final Report and Recommendations of the Temporary National Economic Committee, p. 677. The reference in this excerpt is to a list of the forty-eight states arranged in order of taxable assets, with a parallel list of thirty corporations having over a billion dollars in assets, arranged as their assets compare with the assessed wealth of the several states.

of stockholders and policyholders. It may indeed be questioned whether such aggregation of power is in the public interest.

The story of concentration might be told in another way, as indicated by the data compiled from Federal Trade Commission reports. The top five per cent of firms in the following categories control: seventyfive per cent of developed water power; seventy-eight per cent of recoverable tonnage of authracite; mucty-five per cent of iron ore reserves; sixty-five per cent of the value of manufacturing; forty-five per cent of wholesale business; and forty-five per cent of retail business. The International Nickel Company owns ninety-five per cent of the world's nickel reserves. Two meat packing companies control fifty per cent of production, while four plate glass firms dominate their field. Two sulphur companies and four tire firms are likewise preeminent in their respective spheres. Two match companies, three natural gas firms, and four electric power groups have exercised sovereign control. Even were this power never abused, the fact of its existence would be ominous. In fact, there have been serious abuses. Many of the New Deal laws were enacted to curb dangerous misuse of power. While these laws have been substantially successful, the fact of concentrated power remains unchanged. So long as this condition persists, there remains the social problem of the corporation.

Finally, it must be noted that policies pursued during the Second World War increased the tendency towards concentration of economic power in the large corporation. In general, most primary contracts were let to less than two hundred large firms. Although this business was gradually diffused to smaller firms through subcontracting, the net result was an increase in wealth and power for the larger groups. Furthermore, manpower and material shortages led to the closing of thousands of small business units. As a result, it appears likely that America will leave the war with large business powerful and ever more dominant.

## THE SOCIAL PROBLEM OF THE CORPORATION

Problems Arising from Separation of Ownership and Control. The emerging picture of corporate business now begins to come into focus. From the physical point of view, we see an immensely successful system of large-scale production. Here management techniques have produced an efficient, smoothly functioning machine which is the wonder

<sup>9</sup> Cf. TNEC, Report . . Executive Secretary, ch. 11, and Hearings, parts 4, 10, 10-A, 12, 13, and 28. Monographs 28 and 28-A contain a digest of this testimony and a rejoinder by the insurance companies.

of the world. From the financial point of view, the story is one of increasing concentration of power. The large corporation is becoming more and more dominant and it in turn is controlled, not by its nominal owners, but by a small group of insiders. Thus it becomes possible to portray a relatively small group as dominating over American economic life. Estimates have been given of the sixty families which rule America or of the three hundred or a thousand men who control our destinies. Many of these writings have been sensational and exaggerated. No single group dominates American business. Powerful interests frequently clash among themselves. Many giant firms have sound and respectable policies. Nevertheless, there remain two facts which constitute a problem: there have been past abuses serious enough almost to wreck our economic system; and the existence of concentrated economic power provokes in return concentrated power of government, labor, and farmers, with the result that the individual is often submerged in the struggle between giants.

Freshest in memory are the abuses of the Twenties. They occasioned the plethora of legislation which now regulates business, and they were an important factor in the paralyzing depression of the Thirties. Three groups of financiers profited to a high degree by the corporate practices of the 1920's, namely, company promoters, investment bankers, and inner executives of a corporation.

The promoter has as his legitimate function the task of organizing a corporation. Promoters are the initiators of economic activity. When they judge that certain enterprises offer possibilities for profitable development, they endeavor to divert the funds of the community into these channels. It is their task to make the preliminary surveys, to compile engineers' reports, and to gather like data which they hope to "sell" to the public. They determine the precise nature and function of the new enterprise, whether it be merely the merger of existing companies, or a completely new and even pioneering development. For all this activity they expect to be paid by the new corporation, once it is launched upon its course. Such are the proper functions of the promoter. In the 1929 boom, however, to this legitimate purpose was added financial legerdemain of the most questionable character. Promoters sometimes organized companies mainly for the fat fees which they diverted to themselves. Being "on the inside," they were often able to seize control of the company by one of the devices mentioned above. Frequently they diluted the equity of the stockholders by giving sizable discounts on valuable stock to a "preferred list" of other promoters, bankers or politicians, or by secret stock bonuses or options. Too often friendly directors were placed in control of the new company for the purpose of using its power for speculative rather than business purposes. Many times these directors, and the directors of long-established companies as well, used confidential information gained in their position as fiduciary agents of the stockholders, to work against these stockholders in the stock market. Holding companies charged exorbitant tees to operating companies for the benefit of their promoters. Finally, when a corporation had been driven into bankruptcy, it was not unheard-of that these very groups should direct the reorganization, receive further fees, and again consolidate their power. Thus it happened at times that in the race for power and wealth, the stockholder was used as a tool. He was cajoled into investing money and was flung aside when his usefulness had ceased.

To carry out his projects, a company promoter needs the help of the investment banker. The great established banking houses alone have the facilities, experience, and reputation needed to obtain vast sums of money. To the experienced investor the names of Morgan, Kuhn-Locb, Lehman Brothers, Dillon and Read, and other great New York. Chicago, Boston, or Philadelphia bankers give an assurance which certainly would not have been gotten from the promoters' literature of the 1920's. They create the channels through which the savings of a nation flow into business, either directly by personal investment of stockholders or indirectly by the investment of other peoples' money by the banks, corporations, and insurance companies. Accordingly, no important promotional scheme can succeed without the co-operation of one or other of the great banking houses. As a result of this situation, these houses are able either to promote their own companies and thus gain power directly, or to share the proceeds of the free-lance promoter. In either case they obtain a position of power in the new company. A member of their firm sits on its board of directors. (At one time the Morgan partners held directorships in over a thousand companies, among them the most powerful of the nation.) While this single director cannot outvote the rest, his advice is respected. It would be rash to offend a large banking house, not merely because of its great influence, but also because of the possibility that new financing, with its help, may become necessary. (Banking houses do not often compete for putronage. Once a company finances with a large house, it is expected to return there for its future needs.) In this way

<sup>&</sup>lt;sup>10</sup> Cf. M. Lowenthal, *The Investor Pays* (Knopf), for an example of this process. The Senate hearings on railroad financing, held in 1936–1938, divulged an appalling story of rapacity and fraud in connection with railroad holding companies and bank reorganizations. To forestall future abuses, the Trust Indenture Act of 1939 sets up strict standards for trustees appointed to represent corporation bondholders. Cf. E. Stein, *Government and the Investor* (Farrar), p. 108.

a few great banking houses wield great and occasionally decisive power in the councils of the large corporations. Thus, a notable control over the economic destinies of the nation is vested in the hands of a few men, responsible to no outside authority, and actuated by a code of ethics which in the past has shown major deficiencies.

Finally, "inside" executives in a corporation have frequently been enabled to profit at the expense of the stockholders. High salaries, secret bonuses running into millions of dollars, the diverting of company business toward private corporations controlled by the inside group, and other such abuses of corporate funds were among the evils disclosed as a result of Senate investigations of corporate affairs. Red tape, favoritism, nepotism, and graft infected the body corporate as well as the body politic during these years. It is impossible to estimate how common were these practices. What is important is the fact that American law allowed such irresponsible control in the greatest corporations of the land.

At present many of the more flagrant abuses of the 1920's are prevented by the Securities Act of 1933 and the Securities Exchange Act of 1934. These laws compel complete publicity for all the relevant details of security issuance and trading. The secret profits of the boom years would not be possible today. On the other hand, the basic social problem of separation of ownership and control and the concentration of this control into the hands of a few men has not yet been touched. Particular evils have been cured, but not root causes.<sup>11</sup>

Problems Arising from Concentration of Power. A detailed study of the power exercised by the large corporation reveals some startling facts which present broad social implications. In the first place, the giant company is often the equal or superior of the sovereign state. Its size makes it a factor to be reckoned with in any government decision. A corporation whose stockholders and workers combined may number a million persons is a powerful force. Again, a mass movement of business, because of tax problems, high labor standards, or similar "difficulties," can often cripple an entire region. Thus, New England was severely hurt by the moving of the textile industry to the South where tax and wage advantages had been offered to it. Accordingly, one of the methods used in the infamous "Mohawk Valley Formula" for breaking strikes is to threaten to close a plant unless a strike is de-

<sup>&</sup>lt;sup>11</sup> For material in connection with this section, cf. H. G. Guthmann and II. E. Dougall, op. cit., chs. 10, 14, 26, and 30; R. A. Brady, Business as a System of Power (Columbia); H. L. Purdy and others, Corporate Concentration and Public Policy (Prentice-Hall); F. Pecora, Wall Street Under Oath (Simon and Schuster), TNEC, Report . Executive Secretary, ch. 10; monograph 11, Bureaucracy and Trusteeship in Large Corporations; and Hearings, parts 9 and 22-24.

feated. Usually the police and other stable citizenry then turn all force of "law and order" against the strikers. Illegal acts are often col doned when committed by company men. Probably because of such pressure in 1937, many mayors and some governors were openly antiunion. Corporations armed and paid police to fight their employees Much of the pressure used in political units was the sheer blackmail of threatening to close a plant and move to more accommodating regions. In addition some corporations used direct bribery. A utility magnate once boasted of "owning" the Assembly of one of the largest states in the Union. Sheriffs, burgesses, and similar local officers have testified that they were offered large "loans" during the 1937 strike trouble. Again, the directors of these giant firms have been notable contributors to political campaigns. In particular, the public utility industry is alleged to be a flagrant offender in this regard. Finally, propaganda has been carried to a high degree of perfection in the effort to achieve political power. Without naively accepting the view that advertisers control the news, it is obvious that the modern newspaper usually portrays views favorable to the dominant financial group. Nor is this completely a reflection of sincere editorial conviction. The simple expedient of comparing the average paper with a fairly objective journal such as The New York Times will show distortions of perspective, omissions, insumations, and the like, which behay an obvious propaganda intent. This interpretation has frequently been confirmed by data divulged in various recent Senate hearings. As a result of all these factors, the giant corporation exercises very great political power.

Labor likewise has felt the might that goes with concentrated wealth. For many years it had been denied the right to organize for collective bargaining. Even the powerful support of the federal government behind the NRA and the Wagner Act (National Labor Relations Act) had been unable to prevent some large corporations from denying their workers this elementary right. War measures have been used to coerce and intimidate peaceful workers. Tear gas, nauseating gas, riot guns, spics, hired thugs, and similar amenities of civilization have been considered a standard part of the industrial equipment of certain firms. In the past, and even today in some regions of the country, labor has lived in virtual peonage. While the large corporations have not paid the sweatshop wages of some small firms, yet they have forced men to work under exasperating conditions; and they have been quick to curtail employment during times of recession, tiding over their fixed charges from so-called "depression reserves" and maintaining high prices intact.

The consumer is also powerless before industrial giants. He has to

pay the high, inflexible prices set by these dominant groups. He is expected to pay a price which will yield profits on the "watered" stocks which accumulated as a result of the financial wizardry of the 1920's. This price problem is especially acute in the case of large corporations. They are better able to fix and maintain high prices. They likewise are more subject to the arts of the financial promoter. As a result, it is most probable that the consumer suffered real injustice when these corporations yielded profits even in the worst years of the 1930 depression, and forged ahead rapidly during the revival period.

Because the giant corporation is able to wield such immense power there have arisen sporadic revolts against bigness, as such. Profound thinkers have questioned the wisdom of allowing such power to exist in any group. They have felt that the social values of independent ownership are being gradually stripped from more and more citizens. They see the spectacle of forty or more states paying constant tribute to a few hundred men located in the wealthy Eastern States and controlling the industries of the nation. The welfare of millions of citizens is seen to be dependent upon decisions made around the council tables of a few corporations. Even though this power may never again be abused as it was in the past, its existence is considered ominous in a free government. It is even questioned whether political freedom is more than a phrase, when economic freedom is no more than a memory or an aspiration. Theorists who oppose such a situation, accordingly, would destroy by regulation and taxation the giant corporation. They would not be satisfied with control by government, for they are equally opposed to granting the government the great power which would be needed to enable it to defy corporate might. They desire nothing less than what they style "the American dream" of a nation of really free and independent citizens.12

Proposals for Corporate Reform. It has been noted that recent legislation has curbed some of the worst abuses of corporate power. Nevertheless, many students of the problem feel that further steps should be taken. TNEC recommendations favor increased regulation. Many liberal business men would intensify competition, and the agrarian-distributist school proposes a return to small holdings. By regulation is meant the attempt to stem the abuses arising from the corporate

<sup>&</sup>lt;sup>12</sup> On distributism, cf. H. Agar, The Land of the Free (Houghton); G. K. Chesterton, Outlines of Sanity (Dodd, Mead); H. Belloc, The Restoration of Property (Sheed); and TNEC monographs 26, Economic Power and Political Pressures, and 7, Measurement of the Social Performance of Business The latter monograph should be used with caution, although much of the statistical material contained is of value.

system in the hope that in this way the incentive for concentrated control would be removed. For example, a national incorporation law, requiring all corporations engaged in interstate commerce to take out a federal charter, would check the competitive lowering of state standards. Such a law would write into the corporation charter basic standards of fair dealing. It would require directors to be substantial stockholders in their firm, and at the same time forbid them to own stock in other companies which have important dealings with their concern. It would also forbid many of the abuses which have been permitted in state charters. This, together with the existing laws regulating securities, and more effective methods of checking monopoly, would remove the meentives for the formation of a supercorporation. It is well known that many of these giants cannot compete fairly with an efficient small corporation. There are definite limits to the savings obtainable by size alone. After a certain point is reached, red tape and burcaucratic inefficiency commence. Furthermore, many of the large companies have "watered" stock, diluted in the quest for size at any price. When the subsidiary companies have been purchased at almost any cost, in the quest for absolute power, the equity behind the stock is rather thin. Yet, these companies feel obligated to earn enough to pay their heavy debts and still have profits for their inflated stock. On the other hand, a good small company, financed honestly, can frequently make reasonable profits at prices which would bankrupt a large holding company. It is quite possible, then, that if the difficult problem of regulating the price structure be solved, there will be little incentive left for the supercorporation.13

A second method proposed is that of competition. This device is predicated on the idea that government regulation has not been too successful in the past. In a democratic state it frequently happens that regulated groups are better organized and more powerful than the scattered groups whom regulation is to benefit. Furthermore, the problem of price control, to be discussed in subsequent chapters, is among the thorniest of economic problems. Accordingly, some theorists would supplement regulation of the large corporation with competition designed to remove any chance of profiting from a company bloated with unnecessary financial charges. This competition would be furnished if necessary by government corporations, but preferably by private firms, co-operatives, or foreign companies (through lower tariff barriers). Examples of government competition may be found in the electrical utility field. In this province the evils of financial trickery have been especially severe, and as a result it has not

<sup>&</sup>lt;sup>13</sup> Cf. TNEC, Final Report and Recommendations, pp. 29, 686.

been difficult for some government companies in the United States and Canada to enter into successful competition with such utilities. Co-operative competition has been tried with great success in Sweden. Here the co-operatives forced large cartels to cut prices sharply. It has also been suggested that foreign competition should be used as a regulatory device. The carefully qualified recommendation of a "Committee on Commercial Policy" of the Foreign Policy Association outlines means whereby this may be accomplished without lowering American wage standards. Again, certain states have encouraged competition by small business by giving tax advantages to these groups. It must be noted in this regard, however, that small business has been able to make little headway as yet in the key fields of mining and manufacturing. It is not a simple matter to reintroduce extensive price competition into American business life and thus either make the large corporation an efficient business unit, or force its dismemberment.<sup>14</sup>

The distributist program advocates the destruction of large corporate entities. This school, more convincing in its critical appraisal of existing evils than in its alternative proposals, condemns bigness as such. Its advocates feel that the large corporation cannot be curbed and accordingly it must be destroyed. They would restore the economic freedom which accompanies widespread responsible ownership. In these main points all distributists agree, but beyond this there is a certain amount of dissension. Some adherents of these ideals accept the statement that at times some bigness at least is an economic necessity. They would agree that in a few basic industries very small units might be inefficient. Accordingly, they are reluctant to sacrifice the potential benefits of power production (in relieving drudgery and lessening poverty) because of abuses of corporate privileges. They realize that the evils of competition may also be great. The worst sweatshops in the country are known to exist in the clothing industry, where small shops prevail. Because of these facts they would discriminate in their attempts to decentralize industry. All the relevant social considerations would be taken into account, such as the nature of the particular business, the loss to investors involved, the ultimate position of labor and the consumer, and like data, before action would be proposed. In this way they would not be exchanging one set of evils for another.15

<sup>&</sup>lt;sup>14</sup> Cf. TNEC, Final Report, pp. 479–499, and monograph 17, Problems of Small Business; E. Johnston, America Unlimited (Doubleday); and E. Nourse, Price Making in a Democracy (Brookings). Some suggestions on the financing of small business are given in Chapter 17, treating of economic expansion. The F.P.A. committee report is analyzed in Chapter 13

The three lines of solution outlined above do not of necessity completely exclude one another. Each emphasizes a different technique or stresses a different social value. All are seeking a democratic solution of the problem of financial oligarchy. A final solution may involve a syntheses of the three, involving some decentralization (accomplished by discriminatory taxation and positive steps to promote small business), some regulation, and competition, all tending toward the final objective of the completely democratic state.

## Readings and References

#### **GENERAL**

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## **TEXTBOOKS**

Boulding, chapter 19; Knight, chapter 3; Chenoweth, chapters 10–11; Meyers, chapters 7–8; Bowman and Bach, chapters 4–5; Kiekhofer, chapter 5; Frain, chapters 2, 9; Blodgett, chapter 7; Froman, chapters 7–8; and Spahr, chapters 10–11.

## THE ENCYCLOPAEDIA OF THE SOCIAL SCIENCES

Main articles: Entrepreneur; Business; Captain of Industry; Partnership; Corporation. Subsidiary articles: Organization, Economic, Promotion; Bonds; Stocks and Stock Ownership; Joint Stock Company; Debentures; Equity; Massachusetts Trusts; Corporation Finance, Government Corporations; Holding Companies; Absentee Ownership; Blue Sky Laws; Combinations, Industrial; Government Regulation of Industry; Investment Banking; Trusts and Trustees; Capitalization, Vested Interests, Interlocking Directorates; Morgan Family; Commercialism; Industrialism; Receivership.

# Investment, Speculation, and Business Risk

THE STUDY of investment, speculation, and business risk forms a natural complement to the consideration of corporation problems. It is hardly an exaggeration to assert that without investment banking and security speculation, the extensive corporate system of today would have been impossible. Giant firms require mass markets for their securities as well as for their products. Only trained and specialized organizations could render this service. Thus, we have in the United States great investment banking houses whose function it is to evaluate and market securities. These firms have either branches or correspondents in most of the large cities of the land. As a next step, there exist important trading groups for the purpose of keeping a constant and liquid market in corporate securities. The presence of such a market facilitates investment, because the purchaser of stocks and bonds is assured of a buyer should he desire to dispose of his holdings. Analogous in many ways to the securities markets are the commodity exchanges, which perform a similar function in the case of major staple commodities and raw materials. Furthermore, as will be seen, the mechanism of the commodity markets permits manufacturers and processors to reduce the element of risk through price changes while commodities are being processed. Other agencies and methods for eliminating or minimizing certain business or personal risks also contribute to the productive process. Accordingly, the services rendered by the various groups considered in this chapter are vital to the business, industrial, and financial welfare of the community.

# THE GENERAL FUNCTION OF INVESTMENT AND SPECULATION

Important corporate securities are issued through the *investment* banking system, which might be pictured as a broad reservoir toward which the savings of countless individuals are constantly flowing. These savings either come directly into the capital market or are

routed there indirectly through savings banks, the savings departments of ordinary banks, trust companies, insurance companies, charitable and other endowed institutions, corporations, and the like. At the other end of the reservoir the bankers have arranged conduits through which these savings can flow until they reach some particular industry in need of capital. These conduits are of varying caliber. Some offer a virtually riskless passage. The investor is almost certain to receive his money back but, because of this lact, the rate of payment for the use of his money is likely to be low. Such conduits are called high-grade bonds. At the other extreme are conduits of doubtful value. It is possible that savings passing through these channels may be entirely dissipated or that, on the other hand, they may bring a handsome return. An illustration of this is found in common stocks. Each investor is free to choose the channel through which his savings are to run; the investment banker simply offers the facilities and is paid for this service alone. Of course there exist various agencies for giving the investor advice and enabling him to evaluate various types of securities, but these are secondary, although virtually essential, services.

Since few investors wish to tie up their funds permanently in longterm capital, it is but natural that markets for evaluating and selling such loans or investments should have been evolved. These markets are the security exchanges, which are almost indispensable concomitants of large-scale investment. In these exchanges stocks and bonds are bought and sold, presumably in accordance with the current valuation of these instruments. A powerful but two-edged aid to such trading has grown up in the form of speculation. The speculator is concerned with immediate profits gained by short-term changes in the capital value of the stock, in contrast to the investor who is mainly interested in the long-term capital and interest (or dividend) yield. Speculators buy and sell more frequently than do investors, thus producing a continuous market for many securities. A buyer and seller can always be found for many stocks and bonds. Where such is the case the variation in price between two transactions is likely to be very small. This fact is a definite encouragement to wealthy individuals who may wish the higher profits of investment, without being willing to leave their money indefinitely in any single industry. The value of such fluidity can be the more readily appreciated when one compares the relative position of the investor in securities with that of the owner of real estate.1

<sup>&</sup>lt;sup>1</sup> For divergent views on the value of speculation, of B. R. Schultz, The Security Market (Harper), ch. 2; and E. Stein, Government and the Investor (Farral), p. 47.

Legitimate investment and speculation play a definite part, accordingly, in the expansion of the economic system by capital growth. As a result the investment process acquires great social importance. Since the social effect of this process is great, it is expedient that every effort be made to safeguard the investor and even the speculator from abuses which would defeat the essential purpose of the whole system, namely, an increased flow of savings into legitimate industry. Abuses in the investment field would include any processes whereby an excess of savings instead of going into industry was diverted to promoters, bankers, or other insiders, or whereby an investor was deceived into buying an instrument which was essentially other than he supposed it to be. Such fraud and deception would be an injustice to industry and to the saving public alike. Abuses in the exchange field would include any means whereby a fictitious value was given to a capital instrument. Thus any manipulation of prices, any efforts to deceive the public as to the true value of a stock or bond, and any type of speculation which even indeliberately created false appearances of worth would all be antisocial in their effects. Such activities would involve the defrauding of actual or prospective investors and the enrichment of the unfair speculator. This would be morally unjust and economically unsound. The economic objection to the practice is based primarily on the tendency of wild speculation to divert capital from legitimate industry and to concentrate it in the markets themselves.

During the period 1919-1933, abuses of the type described above were rampant. Investments frequently carried an unwarranted element of risk deriving not from the nature of the enterprise, but from the manner of security issuance. All too often securities were issued at a price far above their real value. The total received from investors was appreciably larger than the total received by the company. This spread was occasioned in part by legitimate commissions, but mainly by large concealed profits to promoters and insiders. Favored groups received stock or stock options at prices well below the market prices and were thus able to make large profits without any risk. Salesmen, newspaper writers, lawyers, and others legitimately (or otherwise) connected with the issuance of the security received sizable bonuses. These facts were concealed from the investor. To facilitate this deceit, devices such as paid newspaper "tips," advice from high-pressure salesmen (customers' men), vague and deceptive advertising literature and prospectuses, and finally the outright creation of a "pegged" market by artificial buying and selling, were all frequently used. Thus securities overvalued by billions of dollars (probably twenty-five) were toisted on the public during this cra.

False values in securities were also created by the security exchanges. Here likewise occurred much deliberate manipulation of prices. "Pools" (syndicates) were formed to stimulate an artificial appearance of activity in a stock. False news was disseminated, even from the offices of the company behind the stock. By these and other devices the prices of stock were driven up until large portions had been absorbed by the public at inflated prices. Insiders then sold and took their profits. Many of these occupied positions of trust in the banks. exchanges or corporations and abused this knowledge by speculating. In addition to these deliberate deals, there was a general rise of security prices caused by widespread public speculation. Much of this speculation was on cicdit-nearly nine billion dollars was loaned by brokers at one time in 1929-a fact which contributed both to the height of the inflation and the depth of the deflation. The prevalence of brokers' loans, and loans by corporations, introduced a speculative element into the banking and corporation systems, with unhappy results for both. When stocks reached heights three and four times the value justified by their prospective earning power, the inevitable decline was bound to be drastic.

The social effects of abuses in security issuance were necessarily great. When it is considered that from five hundred million to several billion dollars annually go into new financing, that the total value of American securities ranges between one hundred and two hundred billion dollars even at the depths of depression levels, that nearly ten million persons own securities, and that millions more have an indirect stake through the banks and the insurance companies, it can be seen that the public interest is deeply involved in these questions. The annual public loss in worthless securities during the 1920's has been estimated at nearly two billion dollars. The banks in particular suffered greatly through the drastic declines in value of securities held as collateral. Scarcely less affected were endowed institutions and insurance companies. Furthermore, the business world is now so inclined to consider the "market" as a barometer of prosperity that any changes in its values might affect business to an appreciable degree. In this way the evils of the 1920's had a much broader effect than might at first be presumed.

A special form of investment common in the 1920's was the purchase of interest in *investment trusts*. These companies were supposed to buy a wide portfolio of stocks and bonds and share the profits with their stockholders. In this way the small stockholder was to gain the higher profits of security investment without risking his entire earnings in particular stocks. In actual practice, however, many of these trusts were involved in the worst frauds and abuses of the period. Worth-

less stocks were unloaded on these companies to the huge profit of insiders. As a result, great losses occurred which shook the faith of the public in this form of investment. The natural reaction was a widespread demand for reform, a demand sponsored not only by the public and the Securities and Exchange Commission, but also by large and reputable investment companies, such as the Lehman Corporation. The fruit of this agitation was the Investment Company Act of 1940, which regulated closely the functioning of such firms. Under this law, investors must be furnished detailed information on the management and policies of an investment company. Any substantial changes in either must be approved by the stockholders. Detailed regulations concerning the competence and responsibility of managerial personnel tend to keep unscrupulous groups out of this business. The securities of the investment companies themselves must be equitable, with nonvoting stock or stocks with unequal voting power prohibited. Future efforts to pyramid such companies through holding company techniques are likewise enjoined. As an added assurance that no circumvention of regulations will be attempted, the SEC has broad powers to require reports, regulate accounting methods, and otherwise exercise general supervision.2

Reform was by no means confined to investment companies. After state laws concerning fraud and deception in securities, the so-called "Blue-Sky Laws," failed because of inadequate enforcement and wide-spread circumvention, two important federal laws were enacted. In 1933, Congress passed the Securities Act and, in 1934, the Securities Exchange Act. These laws are administered by the Securities and Exchange Commission (SEC), a board of five members appointed by the President for five-year terms. The SEC has served as a regulator and policeman over the entire field of corporate finance, enforcing the laws by which it was created as well as others to be considered subsequently. Since these laws appear to have ended permanently the major abuses in the field of corporate securities, only occasional references to such excesses will be necessary in the pages to follow.

## INVESTMENT UNDER THE SECURITIES ACT OF 1933

To remedy the evils of the boom era, the Securities Act prescribed one all-inclusive remedy, namely, disclosure of the material facts affecting a given issue of securities. It was felt that if such a disclosure were made, the investor would then be able to evaluate the issue at its

<sup>2</sup> For a good popular description of this problem, cf. E. Stem, op. ctt, ch 6.

true worth. The parts setting forth the details of such revolutions, and the penalties for failure to make them, constitute the main sections of the Act.

Stocks and bonds of new corporations and bonds of old corporations (their new stocks are frequently offered to their existing stockholders) are originated through the great investment banking houses. The promoter or the officers of the company state their requirements and ask terms of these bankers. They in their turn appraise the apparent value of an issue, market conditions, and the like, and then make their offer to the promoter or company. If these terms are accepted, the house "underwrites" the entire issue, that is, it guarantees a certain amount of capital to the company in question. The investment banking house then disposes of the issue either through its own facilities or by forming a syndicate with other firms. Since investment bankers have accepted outlets, experienced salesmen, lists of customers, and the like, this service is done more quickly and cheaply than would be possible were the company to undertake direct distribution.

To sell securities in interstate commerce, the issuing house must register the security with the Securities and Exchange Commission. For new corporations, complete information must be given about the identity of the promoters, their fees and other remunerations, and any other promotional payments, so that the investor may know who profits by the issue. The amount of fees to be paid to the underwriters must likewise be stated. Furthermore, there must be a clear and detailed disclosure of plans for distributing the proceeds. In addition, corporations which are already operating are required to reveal adequate information about their present status of earnings, capitalization, stock structure, remuneration of officers, and the like. Failure to disclose such information, or material falsification in the prospectus, results in an order to stop the issuance of the security. If the fraud be disclosed after the sale, each signer of the prospectus (promoters, underwriters, and company officers) is civilly liable for a period of three years to any subsequent purchaser who can prove that in his purchase he was dependent upon such a statement. In this way, full knowledge of the relevant facts is assured to any investor.

In order to enforce its decisions, the Securities and Exchange Commission has nine branch offices throughout the country. There its representatives investigate the facts disclosed by the new company and if necessary hold a trial to determine whether or not such a security should be issued. In this way the Commission has set itself up as an agency to protect the public before an issue is sold, rather than as a prosecuting agency to punish offenders in the light of subsequent

revelations. Nevertheless, it has not hesitated to invoke the criminal provisions of the Act, where real fraud was discovered. Prior to the Second World War, nearly five thousand registration statements had been deposited with the SEC, over twenty per cent of which were found faulty in an important way. Most of the faulty statements were either withdrawn voluntarily or as a result of a Commission stop order. In the course of its examination of registration statements, the SEC has discovered an amazing variety of fraudulent or deceptive claims. The fact that such activities still persist under present strict regulations is an indirect indication of what happened when practically no restraints existed.

An additional safeguard to the investor was the passage of the *Investment Advisers Act* of 1940. This law provides for the registration of investment advisers or counsel, and regulation of their activities. Registered advisers are "prohibited from employing any device, scheme, or artifice to defraud any client or prospective client, or to engage in any transaction, or practice, or course of business which operates as a fraud or a deceit upon any client or prospective client." Since in practice only registered advisers can function effectively (others are barred from use of the mails and other instrumentalities of interstate commerce), unscrupulous characters are debarred from this field.

One serious objection has been raised in regard to regulation of secuity issuance. It has been alleged that in the attempt to secure honesty, severe burdens have been laid upon legitimate investment banking. In particular, it is charged that the cost of marketing securities has so increased as a result of detailed information required by registration statement and prospectus, that the flow of new funds into business has stopped. Superficial confirmation is given to these complaints by the fact that the years after the enactment of the Securities Act marked an all-time low in capital formation. In rebuttal, it is noted that railroad securities, exempt from registration under this Act, followed the same trend. Disinterested observers feel that the causes for sluggishness in capital markets are much more deep-rooted than would be indicated by the above charges. The entire problem is examined in a subsequent chapter. Nevertheless, it would be helpful were the SEC able to apply simplified procedures for issues of intermediate size, say from \$100,000 to \$1,000,000 value. Thus, the ex-

<sup>&</sup>lt;sup>3</sup> Seventh Annual Report of the Securities and Exchange Commission, p. 30. These annual reports usually contain excellent summaries of the several laws administered by the SEC, in addition to current statistics. For further information on material contained in this and the preceding paragraph, cf. E. Stein, op. cit., pp. 91 ff. and 215–216.

emptions and aids already afforded to very small issues would be available on a broader scale.4

# SECURITY TRADING UNDER THE SECURITIES EXCHANGE ACT OF 1934

The high standards of honesty enforced by the Securities Act are reinforced by the Securities Exchange Act. The second Act is the logical complement of the first. It endeavors to keep up to date the information given the original investor by making the security exchanges fair markets which disclose the honest current appraisal of the value of a security. The administrative provisions of the two acts differ, however, because of the more varied problem presented by the exchanges. Security issuance is more susceptible of detailed statutory regulation. As a result, the Securities Act lists definite requirements for disclosures, thus lightening though by no means removing the administrative burden of the Commission. On the other hand, disclosure of information is not enough to assure an honest subsequent market for these securities. At present, at least, many speculators are almost indifferent to the earning power of corporations. They gamble on general and special business trends and on the currents set up by the market itself. The volume of such purely speculative trading is such as to require direct regulation by itself, apart from disclosures by the affected corporations. Furthermore, the intricate machinery of trading leaves itself open to the possibilities of manipulative abuse. So varied are the possible forms of this abuse that the Exchange Act had to be formulated in broad, permissive terms. The Commission itself has wide powers to investigate and regulate almost every known misuse of trading facilities. Its regulations, while practically equivalent to statutory law, are nonetheless flexible and adaptable. In addition, certain definite abuses, such as artificial sales for purposes of manipulation, are expressly forbidden by law.

Stocks and bonds may be traded in one of several ways. Informal sales by the nearly seven thousand dealers scattered throughout the country are called over-the-counter sales. The sixty thousand issues of securities sold in this fashion vary in quality, but have in common the feature of a very restricted market. This may be caused by the small or local character of the company involved, the extremely valuable

<sup>&</sup>lt;sup>4</sup> Cf. W. J. Eiteman, "Security Regulation and the Volume of New Issues," Southern Economic Journal, July 1940. On investment banking, cf. II. C. Guthmann and H. E. Dougall, Corporate Financial Policy (Picutice-Hall), chs. 14, 16-17.

nature of a security which makes it closely held, or on the contrary a highly speculative or doubtful quality which might disbar it from the organized exchanges. As a rule such over-the-counter sales account for perhaps half of the total sales of securities. Over sixty thousand issues of stocks and bonds are traded in this way as contrasted with the six thousand listed in the organized exchanges. New capital is found by these markets. They are important, moreover, because of the dubious deals which have been transacted as a result of the relative secrecy they afford, and because of the possibilities they might offer for evading the regulations of the great exchanges.

To protect the general interests of the public in regard to securities traded over-the-counter, an amendment to the Securities Exchange Act, known as the Maloney Act, was adopted in 1938. This Act called for regulation of over-the-counter markets through voluntary groupings of brokers and dealers into national securities associations. These associations must have by-laws designed to prevent fraud and manipulation, to forestall unreasonable profits and commissions, to remove impediments to a free market, to discourage discrimination between customers, or issuers, or brokers or dealers, and in general to safeguard the rights of both sellers and buyers of securities. Members may be suspended or even expelled for violation. To date, the National Association of Securities Dealers, Inc., with more than two thousand members, is the only association registered with the SEC. Its members, however, handle the bulk of over-the-counter dealings. Furthermore, even those dealers and brokers who may not wish to obtain the advantages of membership in this association are forbidden the use of mails and other means of interstate commerce for transactions which violate SEC regulations.5

The great bulk of important securities, however, is traded in the organized exchanges. There are about thirty-five minor exchanges scattered throughout the country, but most business is transacted through the Stock Exchange and the Curb Exchange of New York. The Curb market has stricter rules than have over-the-counter dealers. It requires certain information to be available concerning all stocks traded in by means of its facilities. Fuller disclosures must be made concerning other securities which are formally "listed" on its board. This trading in listed and unlisted securities helps to acquaint the public with a stock, and prepare this stock for subsequent listing on the "big board," or the New York Stock Exchange.

The New York Stock Exchange is a semipublic organization of 1,375 members, who do about three quarters of the organized security trad-

<sup>&</sup>lt;sup>5</sup> Cf. Annual Reports, SEC; and E. Stein, op. ctt., p. 145.

ing of the country. The members have the privilege of trading on the floor of the Exchange. Outsiders are not accorded this privilege, but must trade through a member, paying him the customary commission. Memberships may be sold or transferred, frequently bringing the seller over \$100,000. Members have two main functions, that of a broker who buys for others on a commission basis, and that of a trader or dealer who buys on his own account. No member may act in both capacities in the same transaction. A broker may execute an order directly or he may ask another to handle a specific transaction, splitting his fee with him (the latter is called a "two-dollar broker," a title derived from the share of the commission he formerly received). Dealers in their turn fall into three groups, consisting of the odd-lot dealer who is a jobber, buying and selling stock in amounts smaller than the normal trading unit of one hundred shares (dealing directly only with the commission brokers, not with the public); the floor trader who speculates purely on his own account; and the specialist who confines his activities to one or several stocks. The specialist usually has uncommon privileges in that he knows the complete state of the orders to buy and sell a particular stock. Then, there are bond dealers and brokers, and the inactive members who speculate but rarely, but on such a large scale that the commission savings are worth the cost of the seat. Of this broad group, the commission brokers have the most direct contact with the public, frequently opening branch offices in many cities. On the other hand, the floor trader furnishes continuity and liquidity to the market by his constant willingness to buy or sell, with the hope of profiting on very slight fluctuations.

There are many methods of trading securities, such as the straight cash sale, the margin sale, and the short sale. Outright cash sales must be paid for on biweekly settlement days by the buyer himself. This method of purchase is used by investors or cautious speculators. In the case of margin sales the procedure is varied. The customer pays about half the price of the stock (this is his "margin" of security for the loan) and borrows the rest from the broker. If the stock rises sharply he can sell, repay his loan, and receive about twice the profit he would have received on an outright cash purchase. On the other hand if the stock falls, he may lose his entire margin. Profits and losses alike are about doubled in a credit sale. Finally, there is the short sale, or the sale of borrowed stock. When a speculator anticipates a declining market he may borrow stock and sell it at the top of the market, subsequently making repayment with stock purchased at the new low level. Short traders also deposit a margin (fifty per cent) in order to protect the lender of the stocks should they rise rather than drop in value. There are several methods for borrowing the securities which must be delivered to the purchaser within two business days of the sale. One of the easiest is to use securities which a firm is holding for another customer on a margin account, provided he has given written permission for this. They could be also borrowed from another firm which is holding them at the moment. Finally, brokers regularly lend and borrow stocks from each other, either as a mutual service or at a fee. The borrower advances to the lender the market value of the security borrowed as a safeguard that it will be returned. Of course, all fees and charges ultimately are paid by the speculator who is selling short. Should the price of the stock rise sharply instead of declining, the broker will either demand additional margin funds or else purchase the stock in the current market, making up his loss out of the margin deposited with him.<sup>6</sup>

Many social problems arise from the functioning of these markets. Most of them are being regulated in accordance with the Securities Exchange Act. The first of these problems concerns the speculative use of credit. It may be recalled that this was one of the major abuses of the exchanges during the boom of 1929. At present, the Board of Governors of the Federal Reserve System is empowered to raise or lower stock margins at its discretion. Furthermore, it is permitted to excreise direct control over brokers' loans made by member banks. This control is the more effective because brokers and dealers are now compelled to borrow from this source only. The Board may use a bank's percentage of brokers' loans as a factor in calculating its credit policies towards that bank. It may go further and immediately call its loans from the bank or even suspend it from the System if it continues to make excessive loans on security collateral. In this way the banking system is more or less effectually divorced from the speculative aspect of the security markets.

A second problem arising from the markets concerns the valuation of stocks and bonds. The great exchanges provide a liquid and fairly continuous market for stocks and bonds. To some extent liquidity is fostered by speculation, although as a rule speculators are interested mainly in active stocks which do not need this additional stimulus. This tendency toward excessive activity in some stocks by its very nature brings about the danger of a false valuation. In a boom market a flood of buyers pushes the prices too high, while during a selling

<sup>&</sup>lt;sup>6</sup> On the mechanics of speculation, cf B. E. Shultz, op. cit., chs. 7–20 and for a critical appraisal, cf. H. G. Guthmann and H. E. Dougall, op. cit., ch. 15. In July 1945, the margin required for both long and short sales was raised to seventy-five per cent This was adopted as an anti-inflationary measure.

wave the drop tends to be accentuated unreasonably. These tendencies have frequently been furthered in the past by the deliberate manipulation of certain stocks. Pools or syndicates artificially stimulated the market by buying and selling, giving out misleading information, and the like. Frequently this was done with the aid of insiders, such as specialists, who had access to confidential information. The result of this activity was the creation of lalse appearances of value. These in turn led to the deception of legitumate investors, small speculators, and even the banks who lent on security collateral. Accordingly, it was socially important that steps be taken to prevent fraud and deception m this regard. At present, manipulation, besides being forbidden by statute, is checked by the regulatory activity of the SEC. This takes two forms. The general form requires publication of pertinent corporation data, such as earnings, stock deals by officers and large stockholders (if profits result from such deals stockholders may sue to recover these profits for the corporation, provided the stock was resold within six months of the original purchase), and the like. The second form involves a more direct regulation by the device of watching stock market activity. An expert employed by the Commission is constantly "following the ticker" and any unusual activity is investigated. In addition, the Commission is empowered to regulate the activities of traders, odd-lot dealers, and specialists, if it finds their activities to be detrimental to the market. Thus by the double path of full disclosure and close vigilance, an open, honest market is to be provided.

Some of the knottiest problems of regulation arise from the functions of the members themselves. In the first place criticism is leveled against the practice of allowing members to act both as brokers and traders. This practice, not allowed in most European exchanges, permits the broker to profit from information given to him in a confidential capacity. As a broker he is the agent of the public, supposed to look after the best interests of his clients. But in carrying out this function he is able to use information thus gained to trade in such a manner as to injure his clients. He would be able to take a short position (i.e., to indulge in short selling) on a declining market or a long position (i.e., to buy on margin to sell at a higher price) on a rise, thus changing the price of securities in a manner adverse to his client's interests. This problem is even more acute in the case of a specialist who is informed about the whole market in a given stock. He is not only in a position to anticipate market trends, but he also is able to make personal dealings to the direct detriment of his clients. He might sell a stock at the market price to a client, making a profit, while he has in his book unfilled selling orders at a slightly lower

figure. Again, odd-lot dealers have special knowledge of the trend of buying and selling. They may use this knowledge in such a way as to sway artificially the functioning of the market. They do this particularly by buying or selling stocks from their own long or short positions, instead of from the current market, thus preventing a certain portion of outside activity from affecting the day's market. To all of these objections, the Exchange heads answer that such activities are necessary for a liquid and continuous market. Traders are supposed to discount and anticipate price changes in such a way as to prevent abrupt fluctuations in value. Thus they reflect the best-informed opinion as to the state of the market.

It is a disputed question whether members should be forbidden by law to act as both brokers and traders. The SEC was commissioned to study this problem in detail. In its report it refused to recommend that a segregation law be passed, although it did urge that the exchanges take every step to minimize possible abuses. It was feared that any drastic reforms in this regard might interfere with legitimate trading functions and lead to an erratic rather than a fluid market.

Since much of the effectiveness of the Securities Exchange Act depends upon the quality of administration, a few comments upon the current history of the SEC may be of value. During the first ten years of its existence, this Commission appears to have set up very high standards of public service. It has been honest, efficient, and co-operative. At first it proceeded slowly with its difficult tasks, much too slowly for the taste of extremist reformers, but the results amply justified its cautious procedure. The studies of the first years gave the Commission experience, badly needed data about many obscure sections of the markets, and a technique of constantly increasing effectiveness. The result was adequate protection of public interests without undue hampering of business activity. At the date of the present writing the methods of the Commission have won the respect of most impartial critics within and without the exchanges.

Other problems connected with the stock exchanges are either of relatively minor importance, or are affected by the major reforms involved in the restriction of manipulation. Short selling in particular has been blamed for many evils, especially business recessions. Such accusations have stirred up considerable debate. Defenders of the practice maintain that the deliberate depressing of the market will adjust inflated values without affecting real values. Its opponents maintain that this practice of lowering security values is a disturbing

<sup>&</sup>lt;sup>7</sup> Cf. the symposium "Three Years of the Securities Act" in Law and Contemporary Problems, Jan.-April, 1937.

influence in the economic system, leading to great losses for innocent investors. Most impartial critics refuse to be alarmed at short selling. They feel that it is a purely speculative operation and a logical conrelative of "long" or "bull" operations. They credit it neither with the virtues nor the vices claimed for it. They do not feel that it corrects a high market because the "bears" (short sellers) are usually active on a declining market. Nor do they feel that the covering activities of bears always act as a cushion to the fall of the market. On the other hand, these critics would not admit that such activities are less natural than speculating on increases in price. They maintain that the facts do not substantiate any accusations of real harm done by short sellers. Nevertheless, because of an apparently deliberate attempt to depress leading stocks in the fall of 1937, the SEC now requires that short sales be made at a price of one eighth a point above the market price, thus restricting short sales to a rising market. At present, the Twentieth Century Fund is conducting a careful investigation of the activities of short traders. Undoubtedly their conclusions will aid in the settling of this long-disputed issue.

## COMMODITY EXCHANGES

In addition to the security exchanges, there exist throughout the country great markets for the sale of and speculation in staple commodities, such as corn, cotton, wheat, silver, and the like. Most notable in this group are the grain markets of the Chicago Board of Trade, the New York and the New Orleans Cotton Exchanges, the fur market of the Merchants' Exchange of St. Louis, the New York Produce Exchange, the New York Coffee and Sugar Exchange, the New York Commodity Exchange, and the National Raw Silk Exchange. These exchanges are usually incorporated associations, organized for the purpose of trading in defined grades or samples of a commodity, with the transfer of receipts considered the equivalent of delivery. In their structure they are not too dissimilar to the New York Stock Exchange, but any government regulation over them is exercised by the Commodity Exchange Administration. This commission, composed of the Secretary of Agriculture, the Atlorney General, and the Secretary of Commerce, was created to administer the Grain Futures Act of 1922, now amended under the Commodity Exchange Act of 1936. Its chief function is to supervise the operation of the commodity exchanges, prescribing standards of honesty and responsibility for their members. The Act insists upon complete publicity for exchange transactions, the dissemination of all pertinent information related to trading, and the

prevention of manipulation. By its terms financially responsible farmer co-operatives are admitted as members of the exchanges. It empowers the Secretary of Agriculture to investigate violations and to deny trading privileges to manipulators and other serious offenders. In this way trading in wheat, cotton, corn and a score of minor commodities is being made open and honest.

Of the different types of sales made in commodity exchanges, two are considered most important. In the first place, a cash or spot market exists for immediate or rapid delivery and payment. Buying may be by inspection, as with the livestock market, or by samples or grades, as with the grain exchanges. The buyers usually represent various food processing industries, while the sellers are middlemen of one type or other, such as the grain dealers or the farmers' co-operatives. This type of trading is normally more commercial than speculative. Accordingly, it is not subject to the strict regulation of the Commodity Exchange Act.

A second and more important type of trading is in futures. This involves the purchase and sale of a commodity for delivery at some specified future time and place, such as the purchase of May wheat in February. Thus, for example, a dealer would agree to buy 5,000 bushels of May wheat for a specified price, say \$1.60 a bushel. He would do so on the expectation that by May, the price of wheat would be higher, say \$1.65, so that he would make a profit through the resale of the commodity. Conversely the trader selling this contract is of the opinion that by May the price of wheat would be down, so that he could purchase at, for example, \$1.55 a bushel the wheat which he agrees to sell at \$1.60. As a protection, each party must deposit a margin payment as security against price fluctuations. A rigid system of grading, the designation of officially approved warehouses whose receipts are considered the equivalent of the commodity, and many other safeguards facilitate trading. Nevertheless, the whole process is highly speculative, since it deals with such intangibles as the future supply of commodities whose price it is difficult to predict. The social argument for this speculation is that it provides a continuous and fluid market for these commodities, which otherwise would be subject to drastic fluctuations when large supplies were delivered at different harvesting times. This has not always been the case in the past, when manipulative actions, such as pools, corners in the market, raids by bulls or bears, and similar unsettling practices produced artificial prices, unsettling to farmers and processors alike. At present, however, such operations are closely regulated. Furthermore, price stabilization tends to even out production and consumption, since it encourages

or discourages production. If price rises indicate a predicted shortage, farmers will plant more, while declines in future prices are a warning to divert planting to more profitable crops. Since this leaves price prediction to experts, it reduces the risk arising from ignorance and uncertainty. It is probable that under these conditions a substantial community service is rendered by the exchanges. As an incidental observation, it may be noted that such trading illustrates graphically a double standard of honesty, which has been an intriguing feature of the speculative world. In manipulative operations which, from the public point of view, may be definitely antisocial and dishonest, hundreds of thousands of dollars change hands by means of a nod or a code gesture of traders grouped together around the various "pits." The contract of purchase or sale is merely noted on the brokers' trading cards, and is considered as binding as if it were written and notarized.

An important by-product of the speculative system is the practice of hedging. This is a method whereby processors try to eliminate the speculative risks of fluctuations in commodity prices. If, for example, a business man must use a raw material whose cost is an important item in the total cost of his product, it is obvious that he cannot be oblivious to changes in the price of this raw material. A firm which turns out high quality woolen cloth might find that it bought raw materials at inflated prices and must sell its finished product when the cost of raw wool is low. This is bound to affect its selling of cloth, since clothing manufacturers would be tempted to hold off purchases until this new and less costly wool is processed. The same would be true of cotton cloth, wheat products, and the like. To avoid this risk, the manufacturer contracts for a future sale of the commodity at the same time that he makes the spot purchase of his raw material. Thus, in November he might be buying wool tops at one dollar a pound, or cotton at twenty-two cents a pound or wheat at \$1.65 a bushel. The market for future sale of these commodities would be ninety-eight cents for wool tops, twenty-one cents for May cotton and \$1.60 for May wheat. If the price of the commodity declines, he could buy in the spot market to fulfill his future contract, thus making a profit. Under these circumstances, he could afford to cut the price of his product, taking his profit rather from his speculative contract. If, on the other hand, the price of the commodity rises, he must lose in fulfilling his future contract, since he agreed to sell at less than what proved to be the spot price. But then he can cancel this loss by raising the price of his product, in view of the fact that naw materials are now costly. By this process, he should be able to cancel out the factor of speculative profit or loss, and thus make only his legitimate manufacturing profit. Of course, in practice, this does not always work to perfection, but it is satisfactory enough to afford some protection to processors.

#### BUSINESS RISK

The study of hedging illustrates the problem of business risk. The element of ignorance and resultant uncertainty has a profound effect upon business decisions. While some persons by temperament delight in adventuring into the unknown, most business men prefer a situation where hard, intelligent work will lead to a reasonably certain reward. In like manner, most workers wish to be sure of getting a job where they can carn a living. Although some pleaders of special causes deprecate the trend towards security, to most persons it seems to be common sense. They feel that the business of making a living is too serious to be considered in the same light as a game of chance. Accordingly, the general tendency today is to seek to minimize the factor of risk in the business world.

Some risks can be *climinated* through foresight or precaution. The use of fire-resistant materials can cut down the danger from fire, and the adoption of safety measures can materially decrease accidents affecting person or property. In the business world, it is felt that if more information were available, adjustments could be made for future conditions. As a result, there is a constant demand today for improved statistical services. Several agencies of government, such as the Department of Commerce and the Department of Agriculture, conduct intensive surveys for the benefit of producers and business men. Many private agencies as, for example, the National Industrial Conference Board, perform a similar function. The larger corporations often have their own economists who attempt to gain sufficient information to predict future developments. For the same reason, business men complain against arbitrary actions by government. Many are reconciled to the prospect of state control or regulation of many activities, but they do insist that such a process be orderly and consistent. Constant changes in tax laws and policies or in the edicts of administrative boards produce confusion and uncertainty.

When risk cannot be eliminated, efforts are made at least to shift the burden. Individual firms can often accomplish this by diversification. Thus, for a while, the Owens-Illinois Glass Company went into

<sup>&</sup>lt;sup>8</sup> On the commodity exchanges, cf. J B. Baer and G. P. Woodruff, Commodity Exchanges (1929), II. E. Erdman, American Produce Markets (Heath); and the annual Report of the Chuef of the Commodity Exchange Administration (Superintendent of Documents).

the can business. In this way they were to be protected against shifts from one type of container to another. A smaller example would be the organization of a coal and ice business which at the same time sells mechanical refrigerators. Such a firm is likely to keep its drivers, clerks, and salesmen busy with at least one of the commodities it handles. A phonograph store might sell radios and sheet music. By such methods, seasonal variations or fluctuations in taste might be compensated for. The department store is an ideal example of the permanence of diversified business groups.

The most common method of offsetting risk is by insurance. The philosophy of insurance is the acceptance of a certain cost or loss in place of an uncertain and greater loss. A business man could take the attitude that he will be careful enough to avoid fire, or that his drivers will get into no accidents. But should a fire or an expensive accident occur nevertheless, he may be ruined. He would be better advised to take out an insurance policy against these contingencies. In this way he will be protected at a relatively small cost, in companson to the possible loss. Insurance companies work on the principle that such losses can be predicted on a large scale, even though individuals cannot know their future. Thus, they study national figures on fires, accidents, and other such events. They know the probability of these occurrences in any individual case. They may conclude that the odds are a thousand to one against a fire in a home during any given year. In such a case, the premium would be approximately one tenth of one per cent of the insured value. Or they may find that the chances of a serious automobile accident are one to one hundred, and charge a corresponding premium. Where data can be obtained and there are a large number of independent risks, insurance is profitable and worthwhile.

In the case of life insurance, conditions differ somewhat from insurance of property or against casualties, weather, and the like. Death, of course, is one of the certainties in an uncertain world. But its time for any given individual is not known. Hence it is possible to insure against its happening in any given year. Complete mortality tables compiled by actuarial experts allow definite prediction in this regard. A premium based on these figures gives pure insurance. In practice, however, most life insurance policies follow a different principle. Instead of a varying premium, ranging from a very low rate for young persons to a prohibitively high figure for the old, an average rate is charged. This rate is, of course, much too high for the young. The excess produces a saving which is later applied towards reducing the premium when a person grows older. For this reason, many policies

have a surrender value or can be used as security for borrowing. Such a course is possible only because disguised saving is conjoined with pure insurance. A strict insurance policy would have no surrender value. When the year clapsed, the protection would have been paid for and the transaction concluded. It is the savings feature which permits insurance companies to accumulate the huge reserves noted in Chapter V. Some liberal organizations, such as Consumers' Union, have campaigned against such policies as overexpensive and deceptive. but to most persons these attacks do not appear sound. While the average policyholder may not realize the intricacies behind his policy. there is little reason to believe that he would favor strict or term insurance if he did have such an understanding. A sounder complaint is duccted against the high cost of so-called "industrial" insurance, or small policies which are paid to collectors in small weekly premiums. The cost of collection has made such policies much too expensive for the return they afford. As a result, New York and Massachusetts permit the selling of low-cost policies through the savings bank system at low

In spite of such precautions as are available today, a large element of risk still persists in the world of business. The complexity of economic life makes such a condition inevitable. The most that can be hoped for is progress. Better tools of research will make more information available for individuals and corporations. The regulatory laws of recent years will do much to remove the danger of great speculative movements such as perturbed economic life during the nineteenth century and the third decade of the present century. But technological changes, shifts in fashion and taste, as well as the actions of political units which may result in trade or military wars, all leave a vital factor of uncertainty. The business cycle apparently is still with us. Much has been done, and more will be done, but there are things which it is not granted to man to know.

On risk and insurance, cf. C. O. Hardy, Risk and Risk-Bearing (Univ. Chicago); F. II. Knight, Risk, Uncertainty, and Profit (Houghton); A. H. Mowbray, Insurance (McGraw-Hill); and S. S. Huebner, The Economics of Life Insurance (Appleton). Some material on life insurance is found in the TNEC hearings and monographs listed in Chapter V, although the investment and wealth-concentration aspects are emphasized. An interesting recent development is the attempt to secure federal regulation of fire insurance on the grounds that rates are excessively high, and state commissions are intimidated. Other important types of insurance, such as accident compensation, unemployment insurance, and oldage annuities are considered subsequently in connection with the problems of labor. Bank deposit insurance and crop insurance are likewise treated in appropriate chapters.

# Readings and Neferences

#### GENERAL

Recommended on investment and speculation are E. Stein, Government and the Investor (Fanar); B. E. Shultz, The Securities Market (Harper); H. V. Chenington, The Investor and the Securities Act (American Council on Public Affairs); T. K. Haven, Investment Banking Under the Securities and Exchange Commission (Univ. of Michigan); H. P. Willis and J. I. Bogen, Investment Banking (Harper); A. L. Bernheim (ed), The Security Markets (Twentieth Century Fund); F. E. Pecora, Wall Street Under Oath (Simon & Schuster); and W. Z. Ripley, Main Street and Wall Street (Little, Brown). On commodity exchanges, consult J. B. Bacr and G. P. Woodruff, Commodity Exchanges (Haiper); and H. E. Erdman, American Produce Markets (Heath). On risk and insurance, confer F. H. Knight, Risk, Uncertainty, and Profit (Houghton); C. O. Hardy, Risk and Risk-Bearing (Univ. of Chicago); and A. H. Mowbray, Insurance (McGraw-Ilill). The annual and special reports of the SEC as well as their various releases form valuable source material in the field of investment and speculation. Particularly notable is the Report on the Study of Investment Trusts and Investment Companies (Superintendent of Documents). For the reading of financial news, consult the handy brochure sold by the New York Times.

#### **TEXTBOOKS**

Spahr, chapters 12–13; Mossat and others, chapters 34, 36; Knight, chapter 15; Kiekhofer, chapters 15–16; Chenoweth, chapters 12–13; and Blodgett, chapter 8.

#### THE ENCYCLOPAEDIA OF THE SOCIAL SCIENCES

Main articles: Investment; Investment Banking; Speculation, Stock Exchanges; Commodity Exchanges; Risk; Insurance. Subsidiary articles: Investment Trusts; Stocks and Stock Ownership; Corporation Finance; Financial Organization; Morgan Family; Savings Banks; Broker; Brokers' Loans; Call Money; Blue Sky Laws; Bucket Shops; Business Ethics; Bubbles, Speculative; Corner, Speculative; Fraud; Gambling; Arbitrage, Hedging; Grain Elevators; Agricultural Insurance; Annuaties; Automobile Insurance; Casualty Insurance; Fire Insurance; Health Insurance; Life Insurance; Compensation and Liability Insurance; Group Insurance.

# } PART TWO {

Value, Price, und Exchange

to the right. Now the price would decline. The ultimate result of a change in demand would in this instance be a change in supply, a rise in the amount sold, but no long-run change in price.

The same thought may be expressed in more abstract terms. Supply in the long run involves any period of time sufficiently lengthy to permit complete adjustments in productive capacity. It could mean a change in the use of labor, capital, management or resources. Conversely the short run is any period of time sufficiently brief to preclude appreciable changes in productive capacity. The most obvious instance would be a crop of perishable vegetables. Another example would be a crop of grains which could be stored, such as wheat. An illustration could also be taken from industry in the form of a firm which can vary its output without any increase or decrease of labor. capital or management. An example of this would be a fully integrated book publisher, who could print a thousand or fifty copies of a book, as public taste warranted, without any adjustments in production capacity. In all these cases, chronological considerations are not of themselves important. In the case of most crops, supply is fixed for a year. Industry might conceivably make adjustments in a few months. Whatever be the variations in the examples adduced, the basic idea is that "supply in a given period of time" or "supply in the short run" refer only to the absence of opportunity for adjustment of the factors of production.

The several points just analyzed will be kept in mind when individual firms are confronted with a pricing problem. While they may not use the language of economics, nevertheless all the firms of an industry will be acutely conscious of possible adjustments in drawing up their price lists. When these lists are compared and quantities offered at different prices are added together, we have the supply schedule for a given market. It might be objected, however, that these calculations of price have little relevance, since the market will set the price anyway. Producers who may not like it will still be compelled to sell at market level or not at all. Such indeed will be the case in the very short run for goods which are perishable either physically or because of style. But in other instances considerable adjustments of production will be dictated by variations in price. Some of these would fall within the range of short-run adjustments, as would happen when the popularity of a good led to the decision to continue to produce it without changes, replenishing the amount supplied as fast as demand takes it off the market. Other reactions would involve long-run factors, such as the expansion of facilities for a product which proved unexpectedly popular or the diversion of the factors of

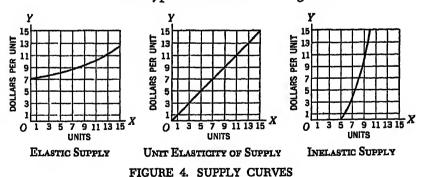
production from a good which some firms could not make at a price which would take it off the market. As a rule it can be said that price is most influential in the long run and that it influences adjustments rather than immediate supply situations. An example could be found in the case of nylon. Hosiery firms which first made this new type of stocking paid a uniform price for the yarn and adjusted their supply schedules in accordance with their ideas of a profitable sales price. If nylon had not proved popular, they would have been compelled to accept the market price and take their losses. When it immediately proved popular, they were unable to make any rapid adjustments in supply because the amount of yarn was limited. Only in time was it possible to shift the factors of production and increase the amount supplied in accordance with the unexpectedly favorable demand schedule. In this sense it can be said that the problem of replacement is more important in regard to price than the firm price schedules of the first goods to be produced. For the latter, the market sets the price. But once the price is set, the ease or difficulty of replacement will determine whether or not individual firms will remain in the competitive struggle.

The illustrations just used permit us to advance to an important notion, that of elasticity. It will be noted that the behavior of suppliers in the three cases mentioned earlier is bound to be somewhat different. The producers of perishable vegetables and fruits find themselves under pressure to sell at any price. They have brought ripe tomatoes and peaches to the market. They cannot bring their product home again lest it spoil. Facilities for cold storage or quick freezing may be lacking. The result is that the quantity offered is fairly definitely fixed, independently of price. The sellers of corn and wheat are in a somewhat better position. While the total amount they offer is fixed, yet they have the power of storage. Hence they can indulge in the luxury of what is sometimes called a reservation price, or a figure at which they would rather hold than sell. Finally, the firm is best off of the group. It can simply refrain from producing if the conditions of demand fail to fit in with its supply schedule. On the other hand, if demand is sustained, its schedule will allow it to produce abundantly at a satisfactory price. Clearly, the short-run supply schedules of the three groups differ from one another and the supply curve will vary accordingly. In the first instance, changes in price will have little effect upon the amount supplied. For the second, the effect will be definite but limited. As regards the third, the impact of change will be noticeable and extensive.

When these ideas are expressed technically, we say that the supply

of produce is inelastic; the supply of grains is fairly elastic; while the output of the finn is quite elastic. Elasticity of supply denotes the change in the amount offered as a result of a given change of price. If the change is exactly proportionate, we have unit elasticity. Thus, if as a result of a rise in demand the price of com were to increase twenty per cent, and the amount supplied were to go up in the same proportion, we would say that the elasticity of corn is one. When the percentage change in the amount offered is greater than the percentage change in price, supply is called elastic. In the case of our hypothetical firm, it may be that a twenty per cent price increase would cause it to raise production by fifty per cent.

On the other hand, when a price change leads to less than proportionate variation in the amount offered, we have inelastic supply. Such would be the situation of our fruit glowers. They may come into the market expecting to sell a thousand bushels at a dollar a bushel. They find that a decline in demand has set in and they can get only fifty cents a bushel. Probably eight hundred bushels would be sold anyway, with the remainder brought home for canning. Here we have a hundred per cent price change and only a twenty-five per cent change in the amount offered (using the lower figure in each case as a basis of reckoning), or an elasticity of one quarter. In addition to these cases, which could easily be duplicated in daily life, there are two other and more hypothetical types of clasticity. Supply is perfectly elastic when any change in price will cause an infinite change in the quantity offered. It is perfectly inclastic when no change in price would affect the amount offered. In the conventional diagrams, perfectly elastic supply would be indicated by a horizontal line and perfectly inelastic supply by a vertical line. The other types are illustrated in Figure 4.



It must be remembered that the concept of elasticity must always be understood in reference to a given supply schedule offered for a definite period of time. It is quite possible that the amount supplied may be inelastic in the short run and elastic in the long run. Thus, if produce growers are disappointed in the amount they receive for tomatoes. many of them may try other crops in the following year. As a result, when marketing time comes around, the amount supplied may be considerably less. The price will rise and many of the deserters will be attracted back into the field. Unless some external stabilizing force intervenes, there may be many such fluctuations in the annual amount supplied. Over a period of time supply is quite clastic. Yet, such is the nature of perishable crop production that its short-run supply curve will always be inelastic. On the other hand, a railroad may have a very elastic short-run supply curve. On the basis of a slight rise in rates, it may be willing to buy more passenger cars, freight cars, and locomotives. But in the long run, after a certain point it would be highly resistant to an upward change in the total amount supplied. It would be unwilling to lay new tracks and install expensive equipment unless it expected a large and permanent increase in demand. Thus, in the short run, elasticity reflects the case in which the amount supplied by a firm using given factors of production can be varied in accordance with price changes. In the long run, it reflects the ability of the firm to vary the amount and proportion of the factors themselves.

The idea of elasticity is of great importance. It enables us to determine the effect of a change in price upon the amount supplied. Thus, we can begin to understand the reason for some of the farners' woes. Where their supply is relatively inelastic, a fall in demand leads to a decline in price and a substantial loss in income. This explains their cry for price stabilization and production control. Another illustration may be taken from the field of taxation. A tax on a commodity tends to raise the price to the consumer without at first changing the net price received by the producer. This would lead to a decline in the amount demanded and a consequent dislocation of supply. Only when supply and demand are relatively inelastic can a tax be levied without inducing changes in the amount produced. Consequently, unless it is deliberately desired to discourage supply (as with the tax on whisky), it is better to tax where an inelastic condition obtains.

#### SUPPLY AND COST

The added considerations thus far introduced in this chapter have not yet probed to the bottom of the question of why supply schedules vary. To answer this question, we must begin by seeing how an individual firm attempts to maximize its profits. Profit is the motivating

force behind supply. It explains the "anxiety" or "eagerness" to produce and sell. The owner of the business renders a service by making his capital available for production. He accepts the risk of loss. He bears the sacrifice of transforming his money into a nonliquid form. In turn he seeks payment for his service, his risk, and his sacrifice. Even in a small business, where he might also be manager and even a part-time worker, he seeks a return on his capital. Otherwise, from a financial point of view, he would be better off as a paid manager for another owner, while he put his funds to work elsewhere. Certainly, if the assumptions of the mobility of capital under competition prevail, an owner would move his money to another use if he receives less than normal profit. This would follow from the principle of the best alternative use of any given factor of production. Accordingly, we may define normal profit as the least sum which an entrepreneur would accept to allow his money to be used in a business. We can be sure that if a better alternative were available, he would accept it.

While the seeking of profit is a motivating force in business, it is but one of the elements which influence supply. Other things are put into a firm, such as labor, management, land, and materials. The total purce of this outlay, plus normal profit, is called the costs of a firm. The total amount received by a firm is called its total revenue. If total revenue does not equal costs as just defined, a firm is not making its normal profit. When it exceeds costs, there is extraordinary profit or a net revenue. The total cost of a firm is made up of the separate costs for the several factors of production. Each of these in turn is determined by the principle of the best alternative. For example, the cost of labor under competition is determined by the other possible outlets for labor. If comparable jobs for unskilled labor are open at sixty cents an hour, then a firm cannot hire this type of worker for fifty cents an hour. The same is true for management. Competition acts as a great equalizer, preventing divergent prices for identical factors. Conditions in one industry affect the costs of other industries. Thus an enterpriser, in undertaking a new firm, will have the cost of the factors to be used already determined for him by the existing economic system. It is for him to use them as efficiently as possible, and for the market, acting through supply and demand, to decide whether or not he will make normal profit or even recover the cost of his outlay, independently of profit. We might visualize an immense process of supply and demand determining alternative or opportunity costs for the several factors of production. It settles the quantities which will interchange. Once the quantities are settled, it is a simple matter to put a label on them called price and we have their costs in money terms. In

this way we can see how the simplified analysis of supply and demand, given in the preceding chapter, can be related to the more complex problem of costs.

Once the costs of the several factors of production have been settled. there remains the difficulty of uniting them in proper proportions so as to maximize profit. Total cost is not made up of homogeneous units, equally divided. There are many elements which enter into it. One of the important distinctions for the firm is that between fixed or overhead costs and variable costs. Overhead cost is that part of the total cost which is independent of output. For example, during the era of railroad construction described in Chapter II, there was a long period of time when tracks were being laid, bridges built, signals installed, grades levelled, and equipment purchased. Stations and warehouses had to be constructed. Clerical and other help had to be hired. At last the trains were ready to run. But before a single lump of coal had been put under the boiler, an immense outlay had occurred. This was a charge quite independent of output, even though it was necessary for it. The interest on the cost of equipment and road and the salaries of permanent officials all continue whether or not trains operate. This cost does not increase when the road operates at capacity, nor does it decline when business falls off.

Variable cost is that part of the total cost which flows from the output of a firm. In our railroad, the cost of coal for the locomotives would come under this heading. The wages of engineers, firemen, conductors, and trainmen would likewise be so classified. The food for the dining cars and the cardboard or paper for the tickets are also among the variable charges. It is not asserted that these costs are of necessity uniform for every level of production. On the contrary, the law of diminishing returns would lead us to expect an eventual rise in variable costs as production increased. With extension of production, there would be some failure to use the factors in proper proportion, usually an overextension of management, or some shortages which would cause an increase in costs.

If we divide the total cost by the units of output to which it is applied, we get the average total cost. This is a combination of fixed and variable charges. Here again we expect divergence at different levels of production. Obviously, where overhead charges are heavy there is going to be a considerable period where the average total cost per unit drops as production increases. This is to be expected because the greater the number of units produced, the less the proportion of the fixed charge to be borne by each. If the overhead charge of a railroad is one million dollars a year to pay its fixed charges, and one passenger

mile is considered the unit of output, at one hundred million passenger miles, the fixed charge alone is one cent a passenger mile. At a billion passenger miles, it declines to one tenth of a cent. This explains why the railroads were able to make more profit when the government forced them to reduce passenger rates. The increased amount of travel demanded at the lower price led to a rise in total revenue exceeding any growth in variable costs. An industry in these circumstances is sometimes called a decreasing-cost industry. Where overhead costs are relatively slight and variable costs rise, we have an increasing-cost industry. Many economists would question the accuracy of this terminology, however, favoring rather the description given subsequently on pages 165–167.

An interesting problem of total costs is afforded by the study of joint costs. Joint costs, of which by-products often furnish examples, occur when the production of one commodity is necessarily accompanied by the production of another. The meat packing industry gives many instances of joint costs and by-products. Its main product is meat, but hides, glands, and other by-products are quite important. Silver is found in copper ore and is produced with it. All this brings in a complication in the problem of costs. When the proportions are invariable, a joint product is usually treated as one product in the matter of cost. When the amount of each can be varied somewhat, even though they result from the same process, a more complex problem ensues. Thus, in the production of gasoline, it is often possible to vary the amount of the several products which come from crude oil. Under these circumstances, the producer will seek to obtain a combination where the attributed cost of last item produced of each type is equal to its price.

A final type of cost introduces a distinction of great importance in economic analysis. Marginal cost is the amount by which total cost will increase as a result of an additional unit of output. Or it may be considered as the cost of the last unit of output. A very practical application of this idea is the cost of running an automobile. Thus, a methodical driver might add up all the fixed and variable costs of using his car and find that he drives 5,000 miles at a cost of five hundred dollars. Considering the convenience afforded by the automobile, he does not find the ten cents a mile excessive. He now received a request from a friend to drive ten miles out of his way in going to work so as to bring the friend to his office. In return, the friend offers him a season ticket to the baseball park. On calculating the value of the ticket, the driver discovers that he is being offered five cents a mile for the use of his car. His own trouble and bother would be ignored, pro-

vided he did not lose money by operating the car the extra ten miles. On the basis of average total cost, he would lose out. But if he calculated the additional cost of these ten miles over his previous total costs, he might find that they cost him only thirty cents more. The ten cent figure included fixed costs. Since fixed costs do not change, marginal cost in practice is a measurement of added variable costs. Accordingly, we find that the driver would find it worth while to take the extra daily trip.

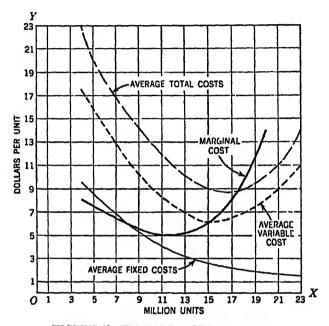


FIGURE 5. THE FOUR COST CURVES

The individual firm, accordingly, is confronted with four costs. At any given level of production it is concerned with its average total costs, and this in turn is made up of the sum of average fixed and average variable costs. Finally, it is interested in knowing the marginal cost at any given level of output. As these are plotted in the traditional form, the average fixed cost will slope downward as production increases, until it gradually approaches zero. Average variable costs could start by sloping downward if productivity rises with the addition of variable units, but eventually diminishing returns set in and the curve turns upward. Since average total costs are the sum of these two, they likewise slope downward and upward, with the possibility that eventually variable costs would intersect total costs. Finally, the

marginal cost curve—not an average—could tend downward and then upward as marginal productivity first rises and then declines. It will be noted that the marginal curve intersects both the average variable cost curve and the average total cost curve at their lowest points. Since marginal cost is related to variable cost, it is the influence which is pulling down the average variable cost. When it rises above the average, it is bound to be an influence raising it up. Accordingly, it must intersect at the lowest point. The same is true of its relationship to average total cost. These points are illustrated in Figure 5.

#### COST AND PRICE

The individual firm confronts the problem of costs by seeking an equilibrium position where there will be no reason to change the quantities of anything under its control. At this ideal position, there will be no addition to or diminution from the amount of labor, capital, and other inputs which it uses, or in the amount of output which it sells. Likewise, there will be no change in the prices which it can control. This will be the stage where there is the greatest possible difference between total revenue and total cost. Here will be most profitable output and maximum net revenue. Under competition this point will be discovered upon analysis to be the stage where marginal cost equals the price of a product. When the cost of an added unit equals its price, a firm has reached its most profitable level. Normally this is at the point where average total costs are lowest. This can be seen clearly if we follow the marginal costs of a competitive firm. Thus, at a low rate of output, a shirt manufacturer may find that the cost of an additional unit of production is three dollars. He is obviously at a stage where he is using his factors of production in an inefficient manner. Then by careful planning and adequate utilization of manpower, he steps up production. At successive stages, he now finds that the cost of an additional unit begins to drop, reaching the two-dollar level and then the one-dollar level. Finally he reaches a stage where it only costs him fifty cents to produce an additional shirt. Once this stage is passed, however, the marginal cost begins to rise. Now he either has to pay overtime wages or break in new, unskilled help. From this point on, the more he produces, the more each additional unit costs. He could continue to the point where the wages of the additional worker were greater than the price he was getting for the shirts turned out by that worker. If the firm were run inefficiently, it would be conceivable that workers could be hired to the point where total output actually dropped, since workers were getting in one another's way.

Long before the last two stages were reached, however, a well-run firm would have calculated its costs and stopped expansion. The problem is: Where precisely should it stop? What costs should determine the decision? At first thought, we might be inclined to call a halt at the point where marginal costs started to rise. This would be a mistake, however, since the selling price must include all costs, overhead as well as variable. At the point where marginal cost is lowest, the average cost-which includes fixed costs and previous variable costswould be considerably higher. The selling price of the firm at this level would be quite a bit above the marginal cost. Accordingly, the firm could continue to expand production, since the cost of new units would be less than the selling price just discussed. Furthermore, this new production tends to lower average total cost and hence competitive price, since the marginal cost is still below the average. At this stage, however, the two begin to converge, as was noted in Figure 5. Marginal costs are rising and average total costs are still dropping. When they meet, the firm is at its most efficient level. As was noted before, there is no point in restraining production while marginal cost is below this level, since new units cost less than the average. Likewise, under competitive conditions, there is no reason for a firm to keep on producing once the point of intersection is reached. At this stage, rising marginal costs would tend to raise the average total cost and hence price. Competitors would then undersell him and force him to produce at the level of lowest average cost. Of course, it is possible for a temporary condition to arise where one firm has lower costs than its competitors. Under these circumstances, our low-cost firm would let its competitors set the price at their (higher) most efficient level, and would expand until its marginal cost reached this new price level. Such would probably be the result in Table 6 below. Nevertheless, under competition such a condition should be but temporary. The high profits of the low-cost firm would attract new and more efficient capital into the industry, drive out the high-cost firms, and stabilize price at the level of most efficient production. Hence the statement that under competition, price tends to be set at the point where marginal cost intersects average cost. Normally, maximum net revenue is at the point of lowest average cost.

The considerations just analysed for the firm as a whole apply equally to the utilization of the several factors of production. The firm tries to use each factor most efficiently and the several factors in the best combination. Thus, in regard to labor, our shirt manufacturer may find that at a low level of production, relatively few shirts are turned out per worker. As the level of production rises, each successive

increase requires less of the workers' time per shirt. Marginal productivity is increasing. This cannot keep up indefinitely, however. Gradually the rate of increase slows up and then reverses itself, as higher levels of production are reached. Intensive utilization of a given working force now produces diminishing returns. Here as above we have the relationship of the marginal to the average. In the beginning, marginal productivity tends to go above the average, since each new unit for a while requires less and less of the workers' time. The average lags behind, since it is composed of the earlier and less efficient units, as well as the later and more efficient. When diminishing returns set in and productivity declines, the marginal curve drops until eventually it crosses the average. The average declines more slowly, since it contains the figures of high productivity attained at

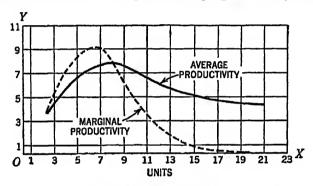


FIGURE 6. AVERAGE AND MARGINAL PRODUCTIVITY

the most efficient levels. When the marginal crosses the average, the firm should refrain from further intensive usage of this factor of production. Further use only lowers average productivity. (See Figure 6.)

The inverse relationship of productivity to cost is obvious. Assuming constant wage rates, the less labor needed per shirt (the higher the productivity), the less the labor cost per unit. Hence the manufacturer seeks the lowest average labor cost for each unit of output. Once he has reached this stage with a given working force, he can efficiently seek a permanent expansion of production only by hiring new workers or by introducing other factors of production, such as capital (machinery), to effect a more efficient production scheme. If the choice is to hire new workers—extensive utilization of the labor factor—the process described before will be repeated. The additional output ascribed to these new workers may raise average productivity. But as still more workers are hired, a stage is reached where the contribution

of each new hand is becoming less and less, until finally the marginal worker produces an amount which is equal to the average. At this point the firm should refrain from further extensive utilization of the factor of production, assuming that the other factors have remained constant in quantity and quality.

The process described in terms of labor applies equally to land, capital, and management. The firm seeks the best use of each factor, and the best combination of factors. It experiments with various inputs of each, varying its intensive and extensive utilization of the several factors. In each case, it will find the marginal and average productivity curves behaving in the manner illustrated in Figure 6. By such methods it discovers its best rate of production.

When the firm is experimenting with the several factors of production, naturally it compares their output in terms of the cost of each factor involved. It may be that the installation of an automatic machine would increase production sharply, much more than would be achieved by adding another worker. But the cost of the machine is so high that the firm decides instead to hire a hundred more workers and use the existing machinery on another shift. Hence the decisive factor is not marginal productivity alone, but rather productivity in the light of the cost of a factor. This is called marginal revenue productivity. When a factor is used most efficiently, its average cost per unit produced is at the lowest point. The revenue of the firm is at the highest point.

With the analysis now available, we can see the reason why our shirt manufacturer has such a wide variation in marginal costs at different levels of output. His first thousand shirts might cost three dollars each because of low productivity of his factors at that rate of weekly production. The second thousand would only cost two dollars each, and the third thousand, one dollar each. The fourth thousand cost fifty cents each. Here marginal cost was lowest, since each additional thousand after this level involves successive raises of twenty-five cents per unit in costs. If these figures are made into a table and a diagram, it will be found that when the firm is producing between seven and eight thousand units a week, it will be approaching its most efficient level, with marginal costs intersecting average variable costs somewhere between \$1.25 and \$1.50. Since fixed costs are not very high in this industry, average total cost would be made up mainly of variable costs. Accordingly, it is likely that the marginal curve would soon intersect the average total cost curve, and that the factory price of these shirts would be about \$1.50.

It might be asked as to whether the law of diminishing returns ap-

plies, once the most profitable combination of factors is obtained. Would it not be possible simply to duplicate this arrangement in as many plants as necessary, provided the market could absorb the output? The answer is that such duplication is not often possible in practice. One or other of the factors, usually management, cannot be extended indefinitely. Overlarge enterprises tend to be cumbersome and less efficient. Empirical proof of this fact was noted when largescale enterprise was studied in Chapter V.

Such is the position of a single firm in the shirt industry. A similar analysis might be applied to any other competitive industry. Thus, we might study the production of high-class, all wool blankets, where capital costs might be more important than in the shirt industry. Here the problem would be illustrated more in terms of machines than labor. But here likewise the firm under discussion would offer as its bid price the marginal cost at the point of lowest average cost.

This single firm will not be the only supplier in the market. There may be hundreds of other firms, each with its minimum average cost. For the sake of simplicity in illustration, we might limit our consideration to five firms, with varying costs of production. In Table 6, we give

#### TABLE 6

SUPPLY	Parce	กะก	Rr.	ABTERT
OUPPLY	T IIII.P.	PER	1014	ANKLI

\$10.00 11.00 12.00 13.00 14.00 15.00 16.00

PROFITABLE LE					
Firm $\Lambda$	2,000				
Firm $B$		3,000			
Fum C			1,000		
Fin $D$				3,000	
Firm $E$					3,000

the amount that each would be willing to sell at a given price. We might assume that these firms are bidding on a government order for blankets, in accordance with rigidly uniform specifications. No one is able to fill the entire order, so they bid at their most profitable price for the quantities they prefer to sell. The low-cost firm will sell two thousand at ten dollars each; the high-cost offers three thousand at sixteen dollars. The others range between. Their several prices are shown in the accompanying table. If the amount desired is six thousand blankets, the price will be twelve dollars. The last two firms listed have costs too high to enable them to compete successfully for this particular order. These concerns will be considered submarginal, with the least profitable firm labeled the marginal firm.

It must be remembered that the conditions just described are possible only under competition. It is assumed that there are enough firms so that the policy of any one cannot by itself appreciably influence price. Then each firm seeks to produce at its most efficient level. The supply schedule, derived from the several price offers made by firms in the industry producing under these conditions, when compared with the demand schedule will give us the equilibrium price.

The noting of variations in costs permits us to pass on to two further stages of our analysis. The first is the concept of quasi rent, or an excess amount paid to any producer above the normal profit which would keep him supplying a particular good. In the illustration used above, two firms were able to make normal profit at a price below that set by the market. This excess is called "rent" from the analogy with land rent, which is a differential return on land, based either on fertility or location. A hundred foot square plot of ground at Broadway and Forty-third Street in New York is worth more than a piece of land of similar size situated on an Iowa farm. Because its metropolitan location permits favorable use of capital and labor, the demand for it will bid up its price. Its use will give a greater return than the use of less well-situated land. Likewise in industry, low-cost firms have a differential advantage. This quasi rent in its turn is likely to be appropriated by the factor in production which is in the most advantageous bargaining position. This would be the factor which is least elastic in supply as far as the firm is concerned. This element would be necessary and no substitutes would be available. Such would be the position of a first-class executive whose managerial ability contributed to the superior efficiency of the firm. Again, a wellorganized labor union whose members are skilled and hard to replace would be able to appropriate much of the differential advantage. Conversely, when labor does attempt to drive hard bargains, added pressure is given to a firm which might be considering the substitution of machinery (capital) for labor.

A second consequence of unequal costs would normally be a tendency for long-run changes in an industry. Under competitive conditions, the making of greater than normal profits on the part of any firm is an invitation for new capital to enter an industry. Modern, efficient firms would utilize the factors of production better than the older highcost companies. Probably they would have better machinery and improved processes. Their entry would mean elimination of the unprofitable firms and a tendency towards normalizing all profits. Thus, competition moves in the direction of uniform costs and profits. All firms would then be producing at the level where marginal cost equalled price. If no important profit differential remained, then the industry would be in equilibrium. There would be no reason for it to expand or contract through the addition of new firms or the elimination of old. Of course, if the reason for the extraordinary profit margin of any firm was such that it could not easily be duplicated (such as exclusive possession of a favorable site), this differential could remain in the face of extensive competition.

#### LONG-RUN CHANGES IN SUPPLY

The stress thus far has been upon the short-run elements in the supply situation. The influences which affect the supply of the individual firm and the industry were considered. Now it is time to consider the consequences of long-run changes in the supply of a particular product.

There are many reasons for a change in the amount supplied. Most obvious is an *increase in demand*. This could arise from variations in public taste, an increase in money incomes, the nonavailability of accustomed substitutes, and many analogous conditions. Sometimes increased demand arises from a rise in the price of related products and a consequent turning to substitutes. A rise in the price of butter could conceivably lead to the demand for margarine in greater quantities. Again, any condition which would intensify the desire for a complex product, such as an automobile, would automatically affect the need for its accessories and related products.

Another reason for change in supply could be increases or decreases in costs. Normally innovations such as improved techniques tend to lower costs and increase supply. Thus, at present the cotton industry faces severe competition from rayon. It is found that rayon yarn is almost as cheap in its initial cost and that it can be used much more efficiently. If, however, a mechanical cotton picker lowers costs considerably, cotton might be able not merely to hold its own, but even to gain further uses which it does not currently possess. Under competition, decreased costs would mean lower prices. This would lead to a shifting to the right of the supply curve and, with no change in the demand schedule, a substantial increase in the amount demanded. If, on the contrary, the new cotton picker is not successful in lowering costs, then it is likely that the amount of cotton supplied will decrease, since demand will shift to a cheaper substitute.

Supply could change in the long run because of changes in the *price* of individual factors and a consequent impact upon the costs of production. One of the commonest examples today would be the increase of wages through collective bargaining. Where such increases do not

represent the appropriation of quasi rent, costs will risc. This will result in a shift of the supply curve to the left and a consequent rise in price. If there has been no change in demand and if the demand curve is not completely inelastic, the amount demanded is bound to drop. The result of this could be elimination of high-cost firms and consequent unemployment. Of course, when the marginal productivity of labor is increasing, as it has on the whole in recent decades, workers could demand higher wages without increasing costs and affecting employment adversely.

The effect of changes in supply varies from industry to industry. Most firms belong in industries of increasing cost. Under these conditions, expansion tends to bring in poorer quality factors, less advantageous sites, and the sheer difficulties of size. This condition should not be confused with the increasing marginal cost in the individual firm which results from diminishing returns from any single factor. It is simply the inability of an industry in which individual firms are at their most profitable level to multiply indefinitely this situation. The fact that technical innovation brings in decreasing costs does not invalidate this rule. The principle is formulated on the assumption of unchanging conditions in regard to the proportion of the factors of production. It is simply a way of expressing the fact that the resources of the earth are limited.

On the other hand, there may exist, at least temporarily, a situation where increased supply may lead to decreasing costs. Even where all the factors of production are at their best use, there are external economies which may accrue to firms in an industry. Such would be the adaptation of other elements in the community to an industry. Larger size may permit the savings of large-scale production in supply companies. Banks and credit agencies may find it worth while to develop specialized departments to handle its business. By-products may come into use as industry expands, when they would not have been profitable on a small scale. Within the industry itself, the passage of time may lead to better-trained and more smoothly functioning organizations. Team-work and mutual understanding could bring about decreased costs, even though there were no innovations or substitutions. In this connection, care must be taken not to confuse a decreasing-cost industry with the stage of decreasing average costs which is a phenomenon of practically every industry. This stage is naturally prolonged in conditions where heavy investments lead to a relatively large overhead cost. In these circumstances, the decline in average fixed costs tends to prolong considerably the period of declining total cost. The condition under discussion, however, is connected with expansion in the entire

industry, which would include an extension of fixed as well as variable costs.

Finally, there are industries in which the phenomenon of constant cost obtains in spite of considerable expansion of capacity. Here an increase in output does not lead either to a proportional increase or decrease in total costs. Such usually are industries where the use of capital and management is small and where labor is an important factor. If in turn the supply of labor is highly elastic, output can be expanded to a noticeable degree without affecting costs. An example could be found in the field of industrial homework, where sewing and small assembly jobs are sublet to families who work at home. They might be sewing dolls' dresses, putting pins or buttons on cards, and like simple repetitive work. Since this type of work is usually extra income for very poor families, there has been frequently an abundant supply of labor. Accordingly, production could expand or contract in accordance with a rise or fall in demand, with little variations in the cost of supply.

The relative ease or difficulty with which long-run adjustments are made determines the elasticity of supply. For increases of supply, two considerations are normally important. The first is the slope of the marginal cost curves of the individual firms in an industry. If a given increase in the output of individual firms causes only a slight increase in the marginal cost of production of a firm, then considerable expansion is possible without a prior and drastic increase in price. Even though a firm is already producing at its most profitable rate, as long as the price is above its average total cost at its minimum level, there is a possibility of upward expansion in output. This follows from an analysis of the marginal cost curve. If we assume that a low-cost blanket firm can turn out two thousand blankets and make normal profit at ten dollars, it would still pay the firm to expand production if the market price is twelve dollars. At its most profitable rate, the marginal cost of production is ten dollars. On all production at that rate, the firm enjoys a quasi rent of two dollars. If the amount demanded permits it to sell even more blankets at twelve dollars, the firm could expand production until the marginal cost equalled the selling price of blankets. It would retain all the profits made at its best rate of production and obtain in addition a decreasing amount of quasi rent up to the point where marginal cost and price were equal. At that point any further production would result in less than normal profit on the marginal product, and hence a firm would not have an incentive to expand beyond this point. It must be remembered, however, that this phenomenon of quasi rent would normally be temporary under competition. Abnormal profits would be an incentive for the entry of new and presumably efficient firms, which would bring price back to a normal level.

A second element leading to elasticity is the case of entry for new firms in an industry. This is determined by the difference between minimum average costs for the successive firms whose schedules contribute to the supply curve. A sharp increase in the amount demanded will lead to an increase in price as an immediate adjustment. But at this increase in price, capital may find it profitable to shift into this industry and new firms will come into production. If the price range required to bring in these new firms is slight, then the supply curve of the industry is elastic. Only a minimum mercase in price is needed to bring about a large increase in the amount supplied. Relating this concept to the previous description of industries, it can be seen that increasing-cost industries tend towards an inelastic supply curve, while constant- and decreasing-cost industries are elastic in supply.

Elasticity of supply is not of necessity reversible. It is possible that in a given industry an upward adjustment is easily made, while a downward adjustment is more difficult to obtain. It is usually easier to expand output in an industry than to bring about its contraction. This is the case because resources are not in practice perfectly mobile. Once a factor has been committed to a specific use, it is not often easy to devote it to another use. An example of this could be found in the textile mills of New England. When the industry shifted to the South, it was not possible to transfer resources with it. Labor remained where it had homes and other ties. The factory buildings could not be moved. As a result, new labor had to be trained and new buildings constructed. Such a hazard is not easily faced. Only a severe and prolonged cost differential would induce an industry to face these losses. While in the case cited a transfer was effected, there are thousands of instances where a change would be impossible. An unprofitable coal mine could not be moved nearer its market. A railroad which is not meeting its fixed costs cannot uproot its rails and move to more prosperous centers. Under these circumstances, transfer of resources is virtually impossible. Only a small amount of the investment can be salvaged. Accordingly, such firms often remain in production at a loss in the expectation that profits will return in the future. Even if such expectation is vain, a firm may still resist liquidation by writing off a high proportion of its fixed cost through bankruptcy. This would lead to a drop in its average cost and a consequent lowering of the price where it can operate profitably. Firms usually give up completely only when price is consistently below their marginal cost of production. Under

these circumstances, even a complete wiping out of fixed charges, if such were possible, would not make operations profitable. The same condition obtains in regard to labor's investment of skill and experience. It cannot easily be transferred when a decline in demand leads to unemployment. In the long run, however, individuals and firms can resist and postpone rather than defeat the forces leading to adjustment. Hence it is correct to say that given enough time, supply in all industries is elastic downward as well as upward.

An important influence upon elasticity of supply is the possibility of substitution of the factors of production. If expansion is not feasible in terms of a previously accepted combination of these factors, it may be possible to achieve the result by using one or more of the factors more intensively. If, for example, increased demand for a metal could only be met by using low-grade ores and thus increasing cost excessively, it might be possible to invest capital in research or in acquisition of more expensive and more modern machinery and thus utilize these ores at a cost which will yield a profit. Again, if the supply of labor is not adequate either because of an absolute shortage of help or because of a price which will not permit profits, it may be feasible to introduce semiautomatic machinery which will take the place of labor or permit the utilization of less skilled workers. Fundamentally, the question of substitution will be decided by two considerations, namely, the technical possibility of changes in the productive process, and the relative price of the several factors of production.

# FURTHER IMPLICATIONS OF LONG-RUN SUPPLY CHANGES

In the course of our discussion of supply, it has been necessary to mention frequently the effect of changes in supply upon the *producers'* demand for the various agents which contribute to production. It may be helpful to consider this point explicitly. It is clear that an increase in demand for a product will bring about a derived increase in the demand for the factors used to make the good in question. The effect of this derived demand will depend upon the elasticity of supply in regard to the factor under discussion. If the agent is both important for production and inelastic in supply (for example, highly skilled labor), then its price will rise. Consequently costs will increase. This industry will have an inelastic supply curve and belong in the increas-

<sup>&</sup>lt;sup>1</sup> For an illuminating study of labor's adjustment to a decline in demand caused by technological or other unovations, cf. S. Slichter, *Union Policies and Industrial Management* (Brookings).

ing-cost group. If, however, this inelastic agent can be substituted for, there will be a rise in demand for the substitute factor. Unless this second factor is highly elastic in supply, there will still be a rise in costs, but not to the same degree as formerly. The elasticity of the supply curve for this industry will depend upon the feasibility of substitution. Thus, it can be said that the ultimate effect of a change in demand for the product of an industry is determined by its derived impact upon the agents which contribute to make this economic good.

From the supply point of view, any increase in the amount of a factor, especially when it is important in the productive process, tends to lower its costs and hence the costs of an industry. This increase could come either from a rise in total available amount (as in the case of labor during a depression) or from an addition to the relative amount, as when a competing use for this factor becomes less important and releases some of its claims upon the agent in question. Such would be the case where a building boom had absorbed most of the available funds for investment locally, causing a rise in the interest rate. The ending of the boom would mean increased availability of funds for business and a consequent decline in the cost of money. The normal effect of such a change would be lowered costs for industry. Accordingly, the amount of the necessary factors is a vital element in the supply schedule of an industry.

In considering costs in any process which involves investment, the time factor cannot be ignored. As long as there is interest to be paid, the longer the period of production, the greater the cost. If a firm owns, for example, a considerable amount of unused mining property, it may be faced by the problem of when to use these resources. Perhaps by holding the mines for ten years longer, it may expect a higher price. But unless this higher price is more than the accumulated interest charges during the period of idleness, the firm will have made a mistake in refraining from using the property. Such considerations are valid in many extractive industries and in firms where storage is the normal procedure. A ten-year-old whisky may be more valuable than a four-year-old product, but the difference must be enough to cover not merely storage and warehousing charges, but also the imputed interest on the value of the stock. Such costs are obvious when money is borrowed and interest must be paid out, but they can easily be overlooked when there is no debt and the charge must be imputed by the company itself. Correct evaluation of this element can have an influence upon supply.

Another consideration affecting supply is the fact of expectations. Future costs, as anticipated by firms, are as important in determining

supply as are present costs. An instance of this would be an anticipated increase in the price of a factor used in production. This would naturally lead to thoughts of substitution, as analyzed above. On the other hand, if the price of a given input is expected to decline, this would stimulate the consideration of expansion and preparations might be made accordingly. The same reasoning applies to anticipated changes in the price of the final product. If prices are expected to rise, every effort will be made to defer and expand production for the more profitable period. Should they be considered likely to decline, the attempt will be to concentrate sales during the present period and to curtail production in the future period. Of course, expectations can to some degree be based on present trends, although anticipations of future new developments are more likely to bring about a change in supply policy.

The effect upon price of change in supply and cost may be summarized by presenting the sequence of events under varying situations. Where an industry belongs under the conditions of increasing cost and relatively inclastic supply, an increase in demand brings three results. The first effect, in the very short run, will be a sharp price increase. This is the natural result of increased demand and inelastic supply. Next the price will drop somewhat as the rate of production within the industry is increased. It will not, however, return to its old level, since production has now risen above the level of most profitable output in the firms constituting the industry. Finally, new capital will flow into the industry and new firms will appear. This will cause a further cutback in cost, but still not to the first level, since the several inelasticities and diseconomies which have appeared lead to a rise of costs for the marginal firm. The older firms, if they are the most efficient, will cut back their expanded production because of the decline in price, but probably not to the extent of return to their previous most profitable level. At this final level, they would be receiving quasi rent or net revenue above normal profits. Hence they would continue to produce up to the level where marginal cost equals price.

In an industry enjoying constant cost and elasticity of supply, the effect of an increase in demand might be a small rise in price during the short-run period. In practice, its elasticity can hardly be such as to avoid all delay and friction and some additional costs, such as overtime for the workers. But in the long run, new firms will come into the industry and price will return to its first level. A somewhat similar situation would obtain in a decreasing cost industry, except that the initial price rise would be followed by a decline to a level lower than previously existed.

Should demand fall instead of rise in the cases just discussed, generally speaking the reverse situation would obtain. In an increasing-cost industry, there would first be a sharp price decline, a rise when production schedules had been adjusted downward, and a further rise when inefficient firms had been eliminated. The ultimate level, however, would be lower than the original and the economic rent of the most efficient firms would be reduced. Where costs are constant, an immediate decline in price would be followed by a reversion to the former level, as production is adjusted and nonprofitable firms removed. In the case of a decreasing-cost industry, a fall in demand would bring about a notable drop in price and a decrease in the size of the industry. Since such a decrease under the circumstances would raise costs, the final price would be higher than it was before demand declined.

These long-term effects, as was noted earlier, are conditioned by the supply and cost curves of the firm and the industry. The stage of most profitable output for the firm under competition is the point where marginal cost intersects total average cost. The marginal cost for the firm, in turn, is determined by the marginal cost of the factors of production in their most economical use. The cost schedules of all the firms in the industry supply the data for the market cost curve. The price of the product is determined in the competitive market by demand in relation to this cost curve. Such is the static situation. In time, changes in demand produce the effects outlined above, determined largely by elasticity of supply in an industry, which in turn depends upon elasticity of the supply of productive agents. The supply curve itself may be changed through innovations, technical changes, and the like. Thus, the clude concepts of the amount supplied and the amount demanded, used in the preceding chapter, are refined by a study of the complex elements which affect supply, particularly by the notions of marginal cost and elasticity of supply.

When changes occur in a constant and orderly manner, leading to a full utilization of resources, the economic system is said to be in a state of dynamic equilibrium. When, however, changes are violent and restricted to certain spheres of the economy, and when resources are not fully utilized, the system is considered to be in a state of partial disequilibrium. A completely competitive economy tends towards a state of equilibrium, through mobility of the factors of production away from unprofitable lines. Since, however, such mobility involves difficult adjustments, there is a tendency away from competition and an attempt to substitute conscious control for an impersonal market. Such attempts do not invalidate all the principles studied in this chapter, but they do

call for profound modifications of some conclusions. Perhaps the economic system might be compared to a boat chugging across a swiftly moving stream. The progress of the boat is determined only in part by its own internal laws. The power of the motor and the decisions of the captain are important influences, but not the only forces which direct the path of the boat. The rapid movement of the waters is also responsible for the ultimate course it takes. So in the economic system, we have the mechanical forces of competition, the conscious direction of those who attempt to control economic life, and the broad forces of total effective demand as studied in Chapters XVII–XIX. After our study of demand, it will be feasible to examine the changes introduced by interference with competition, and then to apply these principles to the American economy.

#### READINGS AND REFERENCES

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### CHAPTER IX {

## Demand and Price

Its existence and the fact that it changes were taken for granted, without any profound attempt to inquire into the underlying causes of this phenomenon. However, the study of competitive price would not be complete without some attempt to delve into the factors which influence demand and, consequently, affect price. In this pursuit, too much should not be expected. It is relatively easy to outline the broad outlines of a theory of consumption, but economists have not yet been successful in introducing the refinement of detail into this field that they have achieved in regard to supply and cost.

### THE PHENOMENON OF DEMAND

It may be useful here to reiterate the point that demand to the economist is not precisely the same as demand would be to the layman. In its nontechnical use, the term has several meanings. It could be synonymous with desire. We hear of a superabundance of goods going to waste at the same time that demand throughout the country is at its highest level. Such is the common plaint in times of depression. But in technical literature, need is one thing, demand another. Even choice is not the same thing as demand, since it must be choice reinforced by the ability to buy. Of course, there would not be demand without either desire or need. Even where there exist sufficient funds for purchasing, there still must be a choice. Hence, for a good to be in demand, it must satisfy a want, there must be available funds to buy it, and the consumer must choose this good among alternative uses of his money.

Again, we do not speak merely of willingness to possess a good. Demand is always at a price. Perhaps most college professors would willingly drive to their tasks in resplendent Cadillacs, equipped with all the latest improvements and luxuries which ingenuity can contrive. It would satisfy their desires for comfort and perhaps for a modicum of ostentation. It could be purchased out of their modest income, pro-

vided they were willing to save in a sufficiently Spartan manner. But in practice few teachers make such a choice. The price is so high, both in regard to original investment and upkeep, that they are not in the market. They would prefer to buy books, take a vacation, live in a comfortable home, and lay away savings for the future. Accordingly, demand always implies the choice of definite quantities at given prices.

The sum of these choices gives us the demand schedule. In the instance of the Cadillac of this particular model, we might assume that most purchasers would be satisfied with one. Not many of us are in the position of the Oriental monarch who was astonished when he discovered that such commodities were not sold by the dozen. In this case the natural method of constructing a schedule for a given community, say Chicago, would be to poll its inhabitants to discover at what price, if any, they would care to purchase such a car. Disregarding the low estimates as impractical in view of the supply curve, we would discover a range from twenty thousand buyers at the price of two thousand dollars to six hundred buyers at five thousand dollars. From this schedule we would construct the demand curve and thus portray the demand for Cadillacs. Turning to a more pedestrian example, we find a slightly different situation in the seasonal demand for oranges. Here we find a price range from thirty cents a dozen at the peak of the season to forty-five cents when supplies are short and sixty cents when they are definitely nonseasonal. Demand, for the purpose of this illustration, comes from a wealthy family, a professional man with good income, and an unskilled laborer whose income is fairly low. In the first group, the price range is no problem. This family will have its breakfast orange juice at any time that oranges can be purchased. The professional man is somewhat more cautious. He is out of the market during the nonseasonal period, a moderate buyer at forty-five cents, and a heavy buyer at thirty cents. Finally, the laborer comes into the picture only at the thirty cent level, and then in carefully measured quantity. Accordingly, in this example not only are buyers entering or leaving the market, but the quantity demanded will also vary with price. When the total amounts demanded at each price are added, a demand schedule and a demand curve can be obtained.

The typical demand curve has what is termed a negative slope. It is closest to the Y axis at high price and furthest removed at low price. This is based on the assumption that demand varies inversely with price. Sometimes this generalization is called the Law of Demand. As a rough general statement it is valid, but it is hardly correct to say that no exceptions are possible. There exist too many amusing stories of storekeepers who prodded slow-selling items by raising their price

to allow us to say that the inverse ratio is invariable. Most people think that price and quulity are so closely related that low-price goods are inferior. Under these curcumstances such odditics as those just uncertioned are possible. Only under the assumption that every consumer is rational and completely informed as to quality would there be practically no exceptions to the law of demand. Even here there would be a few who wish to indulge in what Veblen termed "conspicuous consumption" and who buy high-priced goods simply because of their price. Nevertheless, where quality is considered to be equal, the overwhelming majority will take low-priced goods in preference to more expensive counterparts. Even the vanity which induces conspicuous consumption can be placated by the triumphant conviction that a bargain has been won. A student wishing to satisfy scientific curiosity on this point, even at the expense of personal risk, need only visit the bargain counter of a department store when real buys are featured.

Demand is rarely constant. The fact of rise or fall in demand is a matter of common observation. There are many reasons for trends of this type, with one of the more frequent being change in tasta. Style is deliberately altered for the purpose of stimulating sales. Year by year changes in clothes, automobiles, radios, and the like are rarely substantial enough to evolve a different product, yet the mere factor of novelty, even without appreciable difference, is often enough to produce a desire for this new object. Again, changing fashions may have important long-term effects upon people's buying habits. The fact that slimness is the mode is not without its implications for agriculture. Likewise the trend towards lighter clothing is bound to affect the demand for textiles. When an article becomes a fad, as happened with vitamin pills, demand is likely to skyrocket. Accordingly, it is rarely sufficient merely to talk of the demand for a product. Accuracy usually requires a time statement, such as demand in 1945, or demand during the nineteenth century. These phrases would mean an average demand curve during the periods under discussion.

Another reason for shifts in demand is found in changes in income. For the average individual, an increase or decrease in income is bound to affect his demand for various economic goods. If our mythical professor of an earlier example were to be promoted to the position of president of his large university, then the possession of a Cadillac would not be at all fantastic. His salary would now permit both the initial purchase and the upkeep. Furthermore, he would feel a strong inclination to have a car as distinctive as his new office. While, of course, individual reaction to income changes is difficult to foresee with exactitude, the average reaction is fairly constant. Thus, the Brookings

nstitution study, America's Capacity to Consume, found that the perentage of income allotted to different expenditures varied with coniderable regularity in relation to total income. For example, the proortion used for food tended to decrease as incomes rose. The poor pent ten times as much, on a per cent of income basis, for food as did he rich. In the matter of savings, the situation was reversed, with the vealthy saving over ten times as much, on the same basis, as a family in the range between the poor and the middle class. Accordingly, if he real income of a thousand families were to be double, one could redict with fair accuracy how much of an increase in demand could be expected for food, the home, clothing, and other expenditures.

#### UTILITY AND DEMAND

There are deeper reasons both for the different amounts demanded which make up the demand schedule, and for changes in demand. In he attempt to probe the ultimate factor which determines demand, conomists find that utility is the common denominator in all varieties f demand. Utility, as was noted earlier, is the power to satisfy wants. n this category alcoholic liquors would have a place as well as milk, nd dangerous narcotics as well as healing drugs. This is simply a natter of terminology. It is found that all commodities have a place n the determination of prices. While as an individual your economist night deplore the fact that some addicts of drugs are so bound by the raving that they will buy heroin rather than food when finances are hort, yet he must acknowledge the fact that to these persons, narcotics re more able to satisfy their wants than is food. Similarly, a doctor night consider the end product of such an unbalanced diet as an "ineresting specimen" in the sense that he clearly illustrates certain medial laws. Accordingly, each consumer derives utility from his several surchases, even though the utility in question be merely the satisfaction f a passing whim or an expensive purchase which he later regrets.

Utility occupies about the same position in regard to demand as does ost in relation to supply. This coincidence carries over even to the attent of an equivalent of the law of diminishing returns. There is also law of diminishing utility. This can be seen from several examples. It useful illustration would be the comparison between the satisfaction given by money to various individuals. Most of us can remember hat as children a nickel was welcomed, a quarter called for a celebration, and a dollar was a real event in our lives. As we grew older and armed our living, the scale of values changed. Then, perhaps, a dollar was the first significant figure in the scale of money. If our progress

through life was marked by monetary success, the initial figure rose steadily. While perhaps none of us reached the "bet a million" stage, we might have attained the position where an additional hundred dollars gave us no more satisfaction than the first nickel we got to buy a cangular bar. Obviously, throughout this period the utility of money for each of us has been constantly diminishing, even if we may assume that its purchasing power remained constant.

The same reasoning can be applied to physical objects. Thus, except for a few regions where climate and mores decree otherwise, a suit of clothing is a necessity. The possession of an additional suit which can be worn while the other is being cleaned and pressed is a distinct advantage. It is considered even better to have a change of suits for the seasons of the year, at the very least for winter and summer. It would not be entirely a matter of ostentation to have an additional set of clothing for work or sport. If we are to attend certain functions, a tuxedo will be needed. There is also a place for a full-dress suit. Every item of diess thus far enumerated can answer a definite want. If we were oblivious to changes in style, the ensemble might not be much more expensive than a single suit worn all the time, since those worn rarely could last a long while, provided weight and figure remained substantially unchanged. Once this wardrobe has been purchased, the average person will be more concerned with replacements than with additions. Probably he hesitated very long before getting the fulldress suit in addition to the tuxedo. Accordingly, it can be seen that the degree of utility conferred by each additional expenditure on suits of clothes tended to diminish. Normally there would be a much sharper decline if the purchase was specifically rather than generically the same, as when a second or third or fourth spring suit was being contemplated. As a rule the wants satisfied by the last two would be much less pressing than those filled by the first two.

The scale of utility varies not only within a class, but also between classes. Within a group, we might be able to distinguish between necessary and extra, or luxury, items. Some categories themselves are more necessary than others. Generally speaking, the utility of necessary items in a vital group is greater than the utility afforded by extra or luxury groups, although even here we must take people as we find them rather than as we might think they should be. A girl might go without necessary food to save money for an evening dress. Each individual has a separate category of values, although broad generalizations are possible. On the basis of average reactions, we might consider maximum utility to be afforded by the minimum food, clothing, and housing necessary for existence. For most persons, "necessary"

recreation has an important place. Likewise, the care of health is considered quite important. We would expect the essentials in each class to be taken care of before any further expenditures are considered. If a person is destitute, even these essentials will compete with one another, with food likely to be considered as of maximum utility. Under most situations, however, the essentials are provided for, and the problem is that of allotment of funds to less vital uses. Practically, the question faced by the individual is whether to allot an additional five dollars for food, or recreation, or clothing or some other want.

Since various objects have different prices and most of them are indivisible, the actual comparison is often between groups of goods. Occasionally two items might cost almost the same. A householder might wish to choose between trading in the old car for a new one and getting new furniture for the living room and dining room. Here the car is indivisible, while the furniture could be considered a unit because of the wish to match style and color. But the same amount of money could bring a new radio, also some new clothes, and possibly a modest vacation trip besides. Any one of these latter items could be purchased separately. Yet, several wants must be grouped together to weigh against the cost of a car or a new set of furniture. In practice, then, the terms involved in a given choice are likely to be complex in their component parts. They involve the weighing of the utility afforded by X at a given price versus group Y whose prices add up to the same amount. To speak merely of the satisfaction given by a certain dollar is to oversimplify the situation.

Since there are so many variables in the problem of utility, it is difficult to illustrate the subject by elementary mathematics. Perhaps the nearest approach would be by the use of percentages. We could consider the food necessary for life at 100 per cent and range the other necessities down to 80 per cent of the theoretical maximum satisfaction of wants. Below these classes would be nonessential items. Then within each class there would be a range according to the wants fulfilled either by additional items or better quality. Such a table would give a visual, if somewhat arbitrary, picture of the range of utility For it to be of any practical use in predicting choice, another table would be necessary in which the element of price were considered, since in reality it is not abstract utility which is compared, but utility in terms of the price of economic goods. To construct such a table accurately, an immense amount of information on average prices, average range of choice and preference, and the like would be needed. Accordingly, the tables given here should be considered as merely conventional for the purpose of illustration. The first table indicates relative importance

TABLE 7. RELATIVE UTILITY OF ECONOMIC GOODS

	NECESSARY	ADDITIONAL UNITS	BETTER QUALITY
Food	100	20	10
Clothing	95	60	40
Housing	90	40	30
Medical care	80	60	20
Recreation	50	40	25
Other expenditures	40	40	30

TABLE 8. WEIGHTED UTILITY OF ECONOMIC GOODS

Food	100	20	10
Clothing	95	80	15
Housing	90	80	40
Medical care	80	10	10
Recreation	50	10	10
Other expenditures	40	20	15

to the consumer independently of any considerations of cost. Necessary items will be obtained, practically regardless of cost. If a choice must be made, the order of importance is listed. The second column lists the relative value of additional units both in comparison with one another and with the utility afforded by necessary goods. The same is true of the third column. The comparison works fairly well between columns, reading from left to right, and within individual columns. It breaks down if we reverse the procedure and read from right to left. No combination of goods in Group Three would be likely to supersede items in Group Two, and no combination from either of these groups would replace an item in the first column.

Similar caution must be exercised in using the weighted figures, where an arbitrary effort has been made to list relative values of utility considered in the light of price. Some of the values in the first column could better be represented by infinity than by any finite numbers. No grouping from the other columns would replace them. But within each of the other columns we can make comparisons which might give us some practical idea of the balancing of utility. Thus, a substantial addition to the housing unit might involve the giving up of additional food, clothing, and recreation. The obtaining of better quality housing would imply the relinquishing of better quality goods in other categories, if only a limited supply of funds is available. In spite of the limitations of these tables, they afford a better method of measuring utility as a basis for demand than would be afforded by the attempt to compare "satisfaction." Psychic values are intangible and not susceptible to measurement. More exact comparisons could be obtained by

the use of indifference curves and similar advanced techniques, but their use in this stage of study would be more likely to confuse than to instruct.

A further qualification on mathematical formulations of demand is the fact that many of our choices are nonrational. Habit, custom, and even sheer accident determine quite a few of our choices. Frequently we start with one tooth powder or one variety of shaving cream and rarely thouble to shop around if we are reasonably satisfied with the first. Nor would it be correct to say that we make elaborate calculations of value every time we make a purchase. Nevertheless, we do have rough categories at least as subconscious influences upon our judgment. When pay day comes around, we know how much is earmarked for each category of consumption and how much is free for the most profitable use that may occur. By economizing in food, we may be able to have a quality roast for Sunday. If we forgo a few movies, there will be no difficulty in buying tickets for a play which is coming to town. By resisting the rainbow allure of a new shipment of neckties, we can get the sweater we have wanted for some time. Such are the ordinary choices we make within a given group of goods and services. Again, we may pass up two excellent football games so as to buy a present for the wife. We could forget about the roast and bring home a football for Junior. By using the old overcoat for another winter, we could afford our long-postponed dental treatment. In this way we make our choice between goods and services in different groups. We actually do calculate, if not formally, the relative utility available through different choices in expenditure.

### MARGINAL UTILITY AND ELASTICITY OF DEMAND

We can speak of marginal utility just as we discussed marginal cost. Marginal utility is the increase in total utility which follows from a unit increase in consumption. A single suit brings such a definite increase of total utility that we will not do without it. A second brings appreciable utility also. A third and fourth of the same type of suit bring ever lessening utility. Beyond that, the average person would soon reach a disutility stage, where the care of the suits was more bother than the satisfaction of owning them was worth. Thus, the marginal utility of each additional suit would diminish until zero or minus was reached. Of course, not all marginal utility curves follow this pattern. Some rise before falling. Such would be the case with the consumption of food. One oyster whets our appetite. The second

and third may bring increasing satisfaction. When we come to the sixth, we may still wish that restaurants would be more generous. But we might pause before ordering another helping. The enticing prospect of coffee and a fine cigar at the conclusion of the dinner seems to be a more powerful attraction for the additional fifty cents which we feel we can spare. The utility of oysters has now declined to the extent that limited funds available for food would be used for other choices.

One of the reasons for diminishing marginal utility is that in consumption there is a problem of best proportions just as there is in production. No one utility can act as a perfect substitute for another. Neither food nor clothes can be called completely homogeneous products. So even within a group, variety is demanded. This is all the more true when comparison between groups is made. Furthermore, no want is insatiable. When we have so much, there is little use in seeking more. We need not necessarily sneer when writers tell of the woes and boredom of the idle rich. It is conceivable that an unlimited supply of food, clothing, and amusements could dull one's appreciation for these items. It might not be too bold a generalization to say that just as marginal cost at the level of lowest average cost tends to make price, so likewise marginal utility tends to color the utility of a whole class of goods. The prospect of an additional suit for the very poor man makes his one present suit somewhat less indispensable, and a third lowers the utility of the other two. So it is not fantastic to assert that at the stage when marginal utility approaches zero, the value of the whole appears to be very low. This statement would not be invalidated by the unwillingness of these wretched millionaires to share their misery, since the giving up of luxury would change the terms of the hypothesis and transport them to the stage where there would be unsatisfied desires and cravings. It would be more accurate to say, then, that when marginal utility is low, we do not appreciate the total utility of a product. Only by subtracting successive units and considering the utility lost could we appreciate the real total utility of a good.

The concept of marginal utility must be applied to money to enable us to achieve measurable results. Just as we found it necessary to "weigh" relative utility by introducing price, so likewise the marginal utility of any good is related to its price. It is not the utility of an extra pair of shoes versus the utility of a new hat, but rather the utility of spending a given sum either for shoes or for a hat. Here again the indivisibility of goods must be considered. The marginal utility of two hundred dollars spent for a new electric refrigerator can be compared with the usefulness of the same amount spent for other furnishings or even different categories of goods. For any given good, our marginal

utility schedule would be the amount of additional utility furnished by a money expenditure for that good in comparison with the same money used for an additional unit of another good or goods. If necessary, we would spend all we have for a first unit of food. But once starvation had been averted, our bids for successive units would drop progressively. We would have better alternative uses for our money.

In determining demand and price, it is the marginal utility schedule rather than total or average utility which is important. The total utility of any of the necessities of life would be incalculable, but nevertheless we often calculate carefully when we shop in the market. Since the slope of the marginal curve is downward, it is of necessity lower than the average curve, which includes all the previous and higher figures. Accordingly, to calculate our demand curve, we draw up a schedule of the bid prices for additional amounts of a good. In the neighborhood of a given store, for example, we find that consumers fall roughly into five classes, with only A offering a bid for eggs at seventy cents a dozen, and the A group in its entirety being willing to take a hundred dozen. At sixty cents, B would take a hundred dozen and A one hundred and fifty, and so down the line until at thirty cents group E would take a hundred dozen, and D, C, B, and A would in aggregate want nine hundred. As the price declined, we would find that the total amount demanded by A and B ceased to rise. At thirty cents they would want no more than at fifty. Accordingly, at a low price they get a certain quasi rent or consumers' surplus. To get the actual price of eggs, we draw up this demand curve and impose it on a supply curve derived from various marginal costs at the lowest level of average cost and thus reach the equilibrium price.

Demand curves differ as to elasticity just as do supply curves. Definitions in both cases are about the same. The median is unit elasticity, when a change in price will bring an exactly proportionate change in the quantity demanded. Thus, when price is doubled, the amount demanded is halved. Accordingly, the total amount of money spent on the commodity remains unchanged. If one hundred units are bought at one dollar or fifty units at two dollars, one hundred dollars will be spent on this commodity. If a change in price leads to more than proportionate change in the amount demanded, we have a relatively elastic demand. Here total expenditure will be lower when price is raised and higher when price declines. Only thirty units will be bought at two dollars, but three hundred will be sold at fifty cents. This latter point has very important social implications, since price decreases where demand is relatively elastic mean increased purchases and expanded employment. Finally, perfect elasticity means indefinite changes in quantity

demanded as a result of a small change in price. In such a theoretical situation total revenue would fluctuate from infinity to zero, depending upon the direction of the price change. If, on the contrary, we proceed from unit elasticity in the direction of inelasticity, we find demand to be relatively inelastic when a change in price brings a less than proportionate change in the amount demanded. The raising of the price to two dollars leads to a drop in the quantity purchased from one hundred to eighty. The lowering of the price to fifty cents raises the quantity to one hundred and twenty. Accordingly, under these conditions a rise in price means a rise in revenue and a decline in price means a loss in revenue. This point also has its social implications, since it explains the tendency of monopolists to seek high prices and thus high total revenue. Finally, at the other extreme is perfect inelasticity, where the amount demanded does not fluctuate at all with price changes. The Mona Lisa would be an example of this. At any price the amount demanded could only be the same. Under these circumstances revenue would vary directly with price.

In practice, a given demand curve may be elastic at one level of prices and inelastic at another. Usually at very low prices most commodities are inclastic. At much higher prices, they may be relatively elastic. As a rule the nature of the curve is dictated by the type of good concerned. Very important and necessary goods tend to be inelastic in demand. Strict necessities we must have, regardless of price. It has been noted, for example, that the purchase of food, clothing, and similar vital consumer goods does not vary much between periods of prosperity and times of depression. Neither changes in income nor fluctuations in price seem to affect these expenditures to a great degree. On the other hand, some goods may be inelastic simply because their price is so low that any percentage change is likely to be so insignificant in our budget that it can be ignored. Many types of spices are used so rarely that they are bought only once every several years. Under these circumstances only a drastic price change would affect the amount demanded. In still other cases, demand may be inelastic because it is joint demand with some inelastic commodity. An instance of this would be butter to consumers who are accustomed to this alone as a spread upon bread. Since the demand for bread is relatively inelastic, that quality tends to be imparted to butter as well.

Demand is usually elastic when it passes beyond the necessity stage to the realm of comfort or luxury. The fact that marginal utility tends to decrease as additional units are obtained is an illustration of this tendency. Furthermore, even the first units of comfort or luxury goods can be dispensed with. For example, a city dweller is bound to be affected by both the initial price and upkeep of an automobile. If he can get to his work conveniently by common carrier and finds garage expenses high and parking considerable bother, then he may judge that the marginal utility of a car is relatively low. Furthermore, with consumers' durable goods, replacement at any given time is rarely necessary. Even when they no longer give good service, repairs are possible. Hence price, particularly in terms of the marginal value of the consumer dollar, is likely to be important. It is only to be expected that the purchase of such goods would fall off sharply during a depression if their price remains relatively constant. Under these conditions, a

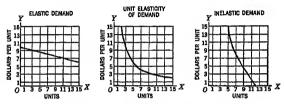


FIGURE 7. DEMAND CURVES

consumer can think of far more vital uses for his limited funds than buying something he does not really need.

The availability of substitutes has considerable influence upon elasticity. If, for instance, consumers who must have a spread with their bread are forced by war rationing to turn to margarine, peanut or apple butter, or preserves, they may find that butter was not so indispensable as they believed. Even gravy could make bread more palatable. Once they were forced into this discovery, price considerations would be more influential in postwar purchases of butter. The association with bread is no longer considered necessary. Accordingly, an upward change in the price of butter or a downward change in the price of an acceptable substitute could change the amount of butter demanded. The first situation would illustrate elastic demand, while the second would bring about a change in demand.

A practical consequence of elasticity of demand can be found in the relative prosperity of industries with inelastic demand and controlled price in contrast to those with inelastic demand and competitive prices. The former tend to have fairly uninterrupted prosperity, as was the case with the electrical utility industry. The latter can be subjected to drastic price declines. This is the plight of agriculture. The farmer

often finds that a good crop brings in a smaller return than a poor crop. Under these conditions, his tendency is to plant more, which only accentuates the difficulty. It would hardly be an exaggeration to say that a major factor in the agricultural depression from 1919 to 1933 was the combination of an inelastic market and low prices. On the contrary where, under noncompetitive circumstances, high prices are conjoined with an elastic market, total production is bound to drop sharply. Such conditions contributed greatly to unemployment during the 1930's. An extended discussion of these points, however, would be anticipating material treated at length in the following chapters. At present, they serve to illustrate the practical value of what seems to be abstract and technical analysis. When this analysis is applied to concrete problems, it indicates certain acceptable lines of solution. Thus, economic analysis would have warned of the folly of attempting price control without control of either production or consumption, depending on which was excessive or deficient at a given price. Crop control for an inelastic market for farm products or rationing for war time shortages are the only possible means of securing price stabilization.

## COMPETITIVE PRICE IN TERMS OF SUPPLY AND DEMAND

Before embarking upon the study of the imperfect forms of competition and of monopoly, a recapitulation of price theory under perfect and pure competition will be of value. The necessary refinement and detail demanded by accuracy may tend to obscure the broad perspective of the subject and leave a certain perplexity or even confusion. It would be unfortunate were we to miss the forest for the trees in a subject which is the core of much important economic literature.

The study of price is incidental to the fact that ours is an exchange economy. The modern tendency towards specialization and mass production emphasizes the importance of exchange, since none among us is self-sufficient. Yet, under our present economic system there must be some set of rules which govern these exchanges. Obviously we do not live under authoritarian governments which can set prices, nor do we as a general rule accept the system of price determination by custom or by some regulatory body or commission. To a large extent our prices are determined by the very markets in which exchange takes place. The competition between sellers and buyers has a profound function in our economy. It determines the price of goods, the quantity which will be exchanged, the allocation of resources to the pro-

duction of various items, and the distribution of the ultimate product (through the money obtained by its sale) among the several producers who contributed to its existence. Competition is a great automatic regulatory force which directs the economy with a smoothness which belies the complexity of the actual mechanism of exchange. In these first three chapters of analysis, the underlying assumption has been that conditions of competition were present to a high degree, usually at least a close approximation of pure competition and occasionally an approximation of perfect competition. The relative ease with which examples were found testify that these assumptions mirror an important part of our economy, even though it is conceded that in other notable segments of our economic system imperfect competition and even monopoly obtain.

The analysis of price determination under competition proceeded by degrees. At first, our consideration was directed to the existence of supply and demand schedules, or the verying amounts which would be bought or sold at differing prices. These schedules were taken for granted, with no effort made to explain the underlying reasons for their existence. By comparing these schedules it was noted that they tended to set an equilibrium price where the amount offered and the amount demanded equalled one another. Any deviation from this price, with supply and demand unchanged, tended to be self-corrective since it would leave an unsatisfied group of buyers or sellers who would act to redress the situation. If the price was too high, the amount supplied would exceed the amount demanded at that price, and the disappointed suppliers would tend to cut prices. If the price was too low, the amount demanded would exceed the amount supplied, and the unsatisfied buyers would bid up the price.

The next step was a study of the underlying forces which determined the supply and demand schedules. In regard to supply, an important distinction was made between the short run and the long run, with the decisive difference being the ability or inability to introduce new factors of production. Ability to make adjustments constitutes the clasticity of a firm or industry's supply schedule, with more than proportionate adjustments of amount supplied to price change indicating a relatively elastic supply curve, and less than proportionate changes characterizing a relatively inelastic supply curve. Supply in its turn is profoundly influenced by cost, which by definition includues normal profit and the outlay for the various factors of production, such as labor, management, land, and the inputs of raw materials. The cost of these factors is determined by their best alternative use. Their use is directed by the effort to secure the best proportions of factors. An-

other variant is the relationship between fixed and variable costs. The sum of these two costs gives us total cost, and the sum of any of them divided by the total units produced affords average costs in the several categories. In contradistinction to these average costs is marginal cost, or the cost of producing an additional unit. Marginal cost is very important for price determination, since price normally equals marginal cost at the point where it equals the lowest average total cost. At that point a firm receives its highest net revenue, since any variation in either direction will raise total cost more than total revenue. Furthermore, the concept of the margin now aids us in determining the best proportion of productive agents. We find that each agent adds to costs and to production. When the marginal productivity curve of a given series of agents intersects average productivity, we find the point of most efficient use. When marginal cost of an agent equals its marginal revenue, we obtain the highest net revenue from this type of agent. The same procedure is applied to other factors and thus the best combination will be achieved. Marginal cost at this level will determine the supply offer of the firm. This combined with the offers of other firms gives the supply schedule and supply curve of the industry.

The supply considerations just summarized involved short-run conditions, where the only adjustment might be in the output of firms rather than in the capacity of the industry. In the long run, supply could change in adjustment to variations in demand, because of innovations and technological changes which would influence cost or because of changes in the cost of the productive agents. In making these adjustments, industries may run into conditions of increasing, decreasing or constant cost. The shape of the marginal cost curve determines the ease of production adjustments which do not involve the entry or departure of firms in an industry, and the ease of entry or departure affects long-term adjustments which change the capacity of an industry. The ease of substitution of factors for one another also affects the elasticity of supply. Finally, the effects of the time factor and expectations in modifying present decisions in the light of the future were considered. If all these adjustments are made in a constant and orderly manner, we have a condition of dynamic equilibrium. Should these changes lead to the optimum use of resources and full utilization of the available factors of production, we are in the stage of full employment. This is the ideal both from the economic and the social points of view.

The other element in determining price, demand, was then analyzed. Demand refers to amounts which will be bought at given prices. The sum of these amounts gives us the demand schedule and the demand curve. The demand curve is normally negative in slope, since demand generally varies inversely with price. Demand itself can change because of shifts in tastes, income, and similar factors. Underlying demand is utility, which affects demand as basically as costs affect supply. Further, the concept of diminishing physical productivity has its counterpart in diminishing utility, as additional units of a good ultimately yield decreasing amounts of utility. Utility, however, is not considered in abstraction, but in relation to price. An effort was made to illustrate various degrees of utility both absolutely and in relation to price. Moreover, not any or every utility is important from the viewpoint of price determination, but only weighted marginal utility, or the utility of an additional unit in view of a given price.

Weighted marginal utility also has its law of diminishing returns. This, of course, is influenced by the fact that diminishing absolute utility affects the price which we would offer for an additional amount of a good. In studying the several demand curves, the phenomenon of elasticity is noted, with the presence or absence of proportionate change in demand to a change in price being the deciding factor. Necessary goods are usually inelastic in demand, while nonessentials tend to be elastic. The availability of substitutes also makes demand for a product elastic. In practice, the elasticity of the demand curve has important implications for several branches of our economy. Inelastic demand and low prices lead to a depressed industry. On the contrary, if prices can be kept high under these conditions, large profits can be made. Elastic demand and high prices, under conditions of imperfect competition, mean curtailed production and consequent unemployment. These illustrations serve to indicate some practical applications of the concept of elasticity.

The ensemble of forces analyzed in these chapters determine price in a fully competitive market and in turn have far-reaching effect upon demand and supply, and the underlying elements which constitute them. Even though much of our economy does not function under conditions of pure or perfect competition, a great deal of this analysis is still applicable to its operation. In other cases, modifications or restatements may be necessary. The perfection of our analysis by inclusion of imperfect competition and monopoly is the task of the chapter to follow.

### READINGS AND REFERENCES

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# Monopoly and Imperfect Competition

omperation in the high degree hitherto assumed does not prevail through large sections of the economy. Instead of a free market where a large number of suppliers and buyers vie with one another and thus set the price of a product, we find to a considerable extent conditions of control on either side. The extremes of control over the market are called monopoly and monopsony, referring to supply and demand respectively. Between the extreme of control and the area of complete freedom in the market, there exist many intermediate conditions, known as imperfect competition, with such subheadings as monopolistic competition, nonprice competition, duopoly, oligopoly, and the like. With the description of these several modes of trade, it is possible to apply analysis to the entire field of actual economic life, and not merely confine the treatment to the extremes, while considering intermediate positions merely as modifications or exceptions.

The amenities of symmetry might indicate a gradual transition from competition to monopoly via the various modifying stages of control. Nevertheless, a more satisfactory approach is the immediate treatment of monopoly. In this way, we proceed at once to the principles which obtain when supply is controlled. Once these principles are clear, it is then easy to delineate the relative position of the intermediate phases. Less attention will be paid to limitations of competition in the field of demand. While control over demand does exist and can affect price in particular situations, it is not important enough to warrant a major portion of our study. The terminology used does recur in economic literature, however, so a brief consideration of the problem will not be out of place.

#### MONOPOLY AND PRICE

The word monopoly is often used in a loose and inaccurate sense. In the strict sense of the word, it applies only when the sciler's power over the product is absolute. He must be able at will either directly to fix the price of the good or to accomplish the same end indirectly by limiting the quantity which is sold. This latter method normally, but not necessarily, implies the power to limit the amount produced. It is conceivable that for some special reason the monopolist may be not able to restrict production or may not wish to do so, yet either by storing the commodity or even by destroying part of it could govern its supply to the market. An example might be an oil monopoly, such as the old Standard Oil Company, which might not find it feasible to cap certain wells, but which would store an excess when it threatens the price structure. Again, a government export monopoly in rubber or coffee could ration sales rigidly without attempting to control production. As a rule, however, the monopolist prefers to reduce production and equate supply to demand at his predetermined price.

Monopoly power is absolute when there is no restraint on the part of consumers, potential competitors, or the state. The commodity in question must be virtually indispensable, with no real substitute available. Such would be the case with electric power, telephone service or the mails. Any conceivable substitute is so inferior that consumers would have to be prodded to an intolerable degree before they sought an alternative product. Nor would it be easy for any competitor to intervene under these circumstances. Those who have lived in states where there are two telephone systems know the trouble and inconvenience which this situation involves. We could hardly permit our streets to be torn up every time a new electric company might decide to enter the field. Under these circumstances one firm controls the entire supply of the good under discussion. Normally, the result is state intervention to regulate the monopoly in the common interest. For strict monopoly, however, this possibility of state interference would also be absent.

For rigid monopoly, accordingly, there should be but one firm with a unique product and no potential competitors. In a less strict sense of the term, the word is used to denote any situation where control over output and price is absolute, even though this may be achieved by concerted agreement of several suppliers. An even looser use of the term involves the situation where a supplier or a group have such an appreciable control of a large portion of the supply that they are able to augment their profit by restricting output and raising price. At the risk of being arbitrary, in the subsequent discussion only the first sense will be used. It will not be difficult later to modify the conclusions reached so that they will apply to any concrete situation.

In computing monopoly price, the first step is to determine the cost schedules of the monopolist. Here we find little difference from the conditions previously discussed in treating competitive supply. The monopolist computes his marginal cost in the same manner as any other

supplier. For example, if the firm is dealing with a single agent of production, such as labor, it calculates the cost of each additional unit in terms of average variable and of marginal cost. Thus, if the addition of ten laborers in a rubber plantation in Malaya leads to a daily rise in variable costs of ten dollars and a rise in output of two hundred pounds of rubber, then the marginal cost of that additional group of laborers is five cents per pound produced. The only modification of our earlier analysis might be the introduction of an element of imperfect competition into the supply for this factor. This would lead to a steeper rise in the marginal cost curve. In the example used above, the first laborers hired might have been obtained for eighty cents a day, but as more were needed, a higher price was necessary to induce them to enter the plantation.

The important schedule for the monopolist is the calculation of sales at a given price. If an electric power company, for instance, were to consider the reasonable range of its price per kilowatt hour as between seven and fifteen cents for domestic usage, it would plot the estimated use of electricity at each of the price levels between seven and fifteen cents. At a price less than seven cents, the company could not cover its variable costs at any level of output, and at a price over fifteen cents so many persons would go back to kerosene or buy Delco units that it would be folly for the firm to attempt such an extortion.

After determining probable use, the next step is to estimate the total revenue obtainable at a given price. This is done simply by multiplying unit price and quantity sold. If we subtract from this figure total cost at that level we get the net revenue obtained by selling at a stated price. Marginal cost can be obtained in the usual manner. Finally, marginal revenue is computed by dividing the increase in total revenue by the amount of units needed to bring about a given increase. It will be noted that in Table 9 the marginal line is conventionally one line

TABLE 9. A MONOPOLIST'S SALES SCHEDULE

1	2	8	4	5	6	7
Electricity (million kw-hr)	Price at Which It Can Be Sold (per kw-hr)	Total Revenue (\$1,000)	Total Cost (\$1,000)	Net Revenue (\$1,000)	Marginal Revenue (\$1,000 per million kw-hr)	Marginal Cost (\$1,000 per million kw-hr)
0	16	0	0	0	140	90
10	14	1400	900	500	100	80
20	12	2400	1700	700	60	40
80	10	3000	2100	900	40	30
40	8.5	3400	2400	1000	85	40
50	7.5	3750	2800	1500		

higher than the figures used to compute it. This is done to indicate that the marginal revenue (or cost) is not at either extreme of the range indicated, but lies somewhere in between. It will also be noted that the table stops at the point where marginal revenue and marginal cost have touched. From this point on marginal revenue will decline and marginal cost increase.

With the data now available, we can proceed to the study of how the monopolist sets his price. Here the first important point to realize is that he is able to fix a price. This is the basic difference between monopoly and competition. Under competition, the market sets the price for a firm, in that each firm seeks to produce at its most efficient level, and only the efficient survive. The monopolist is able arbitrarily to set a price at various levels, and to adjust output to the amount demanded at this predetermined price. Instead of trying to discover the most efficient stage of production, the firm under monopoly aims to find the most profitable point of output. At first sight, we might believe that greatest profit for a monopolist would derive from production at lowest cost, as is the case under competition. But this loses sight of the point that under monopoly the amount produced affects price. At the stage of lowest average cost, the firm may discover that only a fairly low price would produce an equilibrium between the amount supplied and the amount demanded. Here a low unit profit multiplied by high output might afford a respectable profit, but not necessarily the maximum. Since it is assumed that all firms seek to maximize profits, it follows that the monopolist might well set his price at another level.

This ability to adjust production and fix prices explains why in Table 9 there was introduced a new calculation, that of marginal revenue. Marginal revenue is the additional income received from the sale of an added unit. From the sales or demand curve the monopolist can calculate the total revenue produced by sales at different levels of output. By noting the differences in total revenue at several levels of production, he can calculate the additional revenue to be attributed to successive marginal units. The plotting of these figures gives a marginal revenue curve. This slopes downward, since the greater the amount supplied, the less will be the price which will remove it from the market. Ultimately the marginal cost curve will turn upward, as productivity declines. Accordingly, they are bound to intersect. It is at this point the monopolist sets his price. Obviously, it will not pay him to produce any further, since the cost of new units will then be greater than the revenue they produce. But it did pay him to produce up to this point, since each additional unit brought net revenue. The sales price at that level of output, as calculated from the sales curve will be the price set by the firm. (See Figure 8.)

A competitive firm cannot act this way, since at the level just reached average costs may well be under the price set by the monopolist. Under these circumstances, the firm could be sure that a competitor would set a lower price as permitted by lower cost. This competition continues until each firm has reached its most efficient level. If, by chance, the amount supplied by all firms in an industry operating at their most efficient level is so great that it will be demanded only at

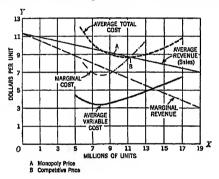


FIGURE 8. MONOPOLY PRICE

a price less than the costs of production in most firms, the only remedy under competition is the adjusting of production by the bankruptcy or withdrawal of high-cost firms. In this way, the amount supplied and the amount demanded will be equal at a price which meets costs of production. Conversely, under competition, if the amount supplied at the most efficient level is so little that the price needed to equate it with the amount demanded is higher than costs of production, this situation will be temporary. New capital will flow into this profitable industry. The amount supplied at the level of efficient production will then be equal to the amount demanded at lowest normal cost of production. All this serves to illustrate the virtual helplessness or passivity of the competitive firm in contrast to the monopolist.

To illustrate this difference, we might imagine that a competitive industry by some chance became monopolist. We might assume that through a licensing arrangement on a new and remarkably efficient

machine for making shoes, the owner of the patent was able to fix the price of all shoes coming into a given market, say, New York City. The firm calculated that in a given line, sales might range from five to ten million pairs, depending upon price, which would vary from a high of fifteen to a low of five dollars. At fifteen dollars a pair, five million pairs could be sold, which would give a total revenue of seventy-five million dollars. At five dollars a pair, ten million pairs would be sold, bringing fifty million dollars. It is obvious that between the two extremes, the monopolist would prefer to produce only five million pairs of shoes. Being thorough, however, he does not let the matter rest here, but calculates his position in the event that he decided to fix output at some intermediate level. He might find that he could sell eight million pairs of shoes at ten dollars a pair. The extra three million pairs would bring in only five million dollars additional revenue, whereas the cost of that added production might be nine million dollars. Clearly, the ten dollar level is out. On the other hand, at fourteen dollars he could sell six million pairs. The marginal million pairs now brings nine million dollars revenue, whereas marginal cost may be only four million. Evidently, this price is better than the fifteen dollar price. Perhaps he will end up selling seven million pairs at thirteen dollars cach.

Leaving aside the hypothetical case, in the actual shoe industry, which is competitive, price would be set at the point where the marginal cost intersected the line of averago total cost. Since in the illustration used above marginal cost at different levels ranged between three and four dollars, it would not be surprising if the competitive price were to be five dollars or less. While this example is arbitrary, history gives abundant reason to believe that frequently monopoly price is as excessive as it was in the case depicted above.

The basic difference between a competitive industry and a monopoly is that the former of necessity seeks to sell all its output at the most efficient level of production. That all its output will be taken can be seen from the very terms of the analysis of competitive production. It is assumed that the supply schedule is drawn up as a result of the offers of many firms operating at their most efficient level. When demand sets price as a result of interaction with the supply curve, it is by definition adequate demand to take all that is offered at the price. Furthermore, long-rum supply adjustment will see to it that practically all firms are operating at their most efficient level. Any firm which has higher costs as a result of producing beyond that level would make needed adjustments. A firm which is in the decreasing cost stage would have every incentive to increase production and lower costs, since the additional

production would not affect price, but would mean a greater net profit. Hence under competition the greatest revenue over the long run is had where a firm is at its most efficient level. The only limit to growth is the problem of rising costs once the best stage of production is reached. With monopoly, on the contrary, a given increase in volume may not bring a proportionate increase in revenue, since the output of the monopolist has a definite effect upon price. To sell more, he must either lower price or raise selling costs, thus adversely affecting revenue. Consequently he will not expand production beyond the point where marginal cost equals marginal revenue, even though his average cost is still falling. In other terms, under competition demand is perfectly elastic at market price, whereas under monopoly demand is not completely elastic at any given price. The result is that the stage of maximum net revenue for the different types of firms is bound to be different.

#### THE PROBLEMS OF MONOPOLY

The method of calculating monopoly price enables us to dispel one common notion, namely, that the monopolist can recoup any expenses by adding them on to his price. Thus, popular writers speak of firms accepting temporary losses so as to gain a victory over labor or to freeze out a potential competitor, with the assurance that these losses can be passed on to the public later through higher prices. But if the firm enjoying complete control has correctly calculated its position, higher prices would mean lower net revenue. Accordingly, when such a firm wages a strong fight to keep out a labor union, its purpose is to prevent one of its productive agents from acquiring a monopoly of its output (input to the firm) and thus appropriating a higher share of the monopoly profit. Again, if this company accepts temporary losses so as to discourage a potential competitor, the purpose is to prevent a future situation which would lower the price below the most profitable level. Once these preventive losses are incurred, they can be recouped only in the sense that abnormal profits will continue at the same level as before. A threat to their existence has been removed.

Much confusion over monopoly profit has arisen because the monopolist himself often does not know the best level of output. Normally his costs cannot be computed except by trial and error. Under such conditions, the usual procedure is to keep prices high so long as they produce a good profit. It would be considered dangerous to lower them in order to test results at a higher level of output, since in practice there might be public clamor against the monopolist if he found it

necessary to raise them again to a more profitable level. In the United States today, the possibility of public regulation or prosecution must be kept in mind. Accordingly, monopolists try not to call public attention to prices if it can be avoided. But frequent experimentation would create the very attention they are trying to avoid. An anomalous consequence of this is that sometimes a firm may be receiving low profits or losing money when a lower price would be more profitable. Such was the case with the railroads when they were forced to lower their passenger rates in 1940, and found the new rate more profitable than the old.

When a monopolist is confronted with declining profits or when he wants to change the demand for his product, the normal procedure is to raise selling costs through advertising or other forms of sales promotion. If this procedure is successful, he can now sell a higher output without changing his selling price. Since a monopolist normally has not reached the most efficient level of output, his average costs will decline with the increase in production, while his price remains unchanged. This will mean increased profits. His problem is to calculate the increase in total revenue which would result from increased sales at a stated price, and to subtract from this figure the cost of sales promotion. So long as the former total is greater than the latter, it might pay him to concentrate on expanding sales. Naturally, however, he will seek the level where the net increase in profits reaches a maximum as a result of the sales campaign. Selling costs follow a law of diminishing returns in the same manner as do the agents of production. Obviously, when the marginal cost of promotion equals the marginal additional profit derived from promotion, there is no point in further extending sales effort. In regard to the use of sales promotion, it must be noted that the subjective opinion of the monopolist is the controlling factor in the decision. Objectively it may be that price cuts might be more desirable than sales promotion. Certainly the public interest would normally demand such a course. But to the monopolist the prime consideration is the safeguarding of profits and this usually means to him safeguarding the price of his product.

Another method of increasing output without necessarily reducing all prices is the practice of price discrimination. This is the technique of selling different units to different customers, or even to the same customer, at several prices. Thus, the "cream" could be skimmed off the market with the highest price. Then, it is found that by increasing output, additional units could be sold at a lower price, provided the first market was not disturbed. This procedure is carried out in many ways. A well-known example is the varying of the price of electricity according to the amount used and the purpose for which it is used. In-

dustrial consumers get better rates than residential users. The latter in turn might receive a preferential rate for heating and cooking, and also a reduction for general purpose use over a certain level. Such a practice is feasible provided two conditions are present: first, the cost of the additional output must be less than its price; and secondly, there must be no possibility of resale. Obviously an electric power company could not permit a factory to resell current to homes, nor could it permit the use of its heating circuits in homes for general purpose utilization of electricity. Another instance of price discrimination is the "dumping" of products in a foreign market. A publisher might sell cheap editions in England. A typewriter firm might find it worth while to lower prices so as to gain sales in France or Belgium. Under conditions of price discrimination, the usual objective is to obtain the same marginal revenue in each of the markets. At this stage there would be no reason to transfer from one market to another. Underlying this practice is the assumption that different demand curves exist in different markets. If the demand curves for industrial and residential use of electricity were the same, there would be no point in discriminating between them. But when markets are separate and demand is different, it is possible to have several rates of output at which marginal cost equals marginal revenue.

The concept of marginal revenue governs the monopolist's demand for the various agents of production. The worth of an additional unit of input is determined by the addition to the marginal revenue which this unit would effect. Since the marginal revenue curve often declines rather steeply because of inelastic demand, it follows that the monopolist's demand for productive agents is frequently inelastic. The cost of adding an agent would be greater than the increase in revenue, once the most profitable revenue level had been reached. A rise in the price of this agent means an increase in marginal costs and a consequent change of the point where marginal cost and marginal revenue intersect. This would lead to higher price and a curtailment of output. Reduction of output in turn means a decreased need for input and a resultant lesser use of the productive agent. If, however, this reduction were slight because of inelastic demand for the product, the effect upon the input would not be great. Under these circumstances, for example, labor could seek a higher wage without producing appreciable unemployment.

Marginal revenue likewise governs a monopolist's reaction to a fall in demand for his product. This would call for a revision of his sales schedule. The sales curve would shift to the left, as would the marginal revenue curve. A new point of intersection with the marginal cost

curve would have to be found. As a rule the reaction would be a decline both in output and in price, with the extent of change depending upon the slope of the marginal cost curve. If the latter rises steeply, only a slight adjustment in output would be necessary before the most profitable level would be reached. When, however, the marginal cost changes only slightly with change in output, a sharp reduction in output may be necessary to lower costs appreciably. Usually under these conditions, the reaction is rather an effort to intensity sales promotion. The theory would be that the decline in demand was due to a failure to push the product aggressively enough in the public mind.

On the basis of the principles just stated, the effect of taxation upon a monopoly can be deduced. Generally speaking, a fixed tax will involve no change in monopoly price or output. Such would be a tax on profits, a franchise tax or a property tax. These costs would not affect either marginal cost or marginal revenue. On the other hand, a variable tax, such as a tax upon output, does add to the marginal cost of production. The result would be a decline in output and a rise in price. Accordingly, a tax of this sort is shifted to the consumer, whereas a fixed tax or a tax on profits is absorbed by the monopolist.

## MONOPOLY IN THE LONG RUN

Thus far in the discussion of monopoly, few allusions have been made to long- or short-run considerations. Such limitation is understandable when the definition of long run is remembered. Ordinarily, long-run adjustments imply a change in supply through the entry of new firms or the departure of old. Since strict monopoly by definition precludes the entry of a competitor, any such long-run adjustment would automatically change the terms of the study. It would no longer be monopoly, but duopoly or oligopoly. Nevertheless, in practice a monopolist cannot be completely insensible to the long-run problem. In the first place, any change in demand, or any sales devices which increase output, or any other technique, such as price discrimination, which leads to increased sales, necessarily involves a question of the optimum production unit. It may well be that the monopolist may expand his plant. Conversely, a fall in demand could lead to the retiring of equipment and the scrapping of installations.

A second long-run consideration for a monopolist is the possibility of greater elasticity of demand with the passage of time. In our original definition, we precluded the consideration of substitutes. Yet, if monopoly price is high for a prolonged period of time, there may be incentive for research. People may learn to do without a product or

to make something else serve the purpose. In our day, for example, three goods, rubber, cotton, and silk, which had something of the monopolistic connected with their sale seem about to lose ground to substitutes. The rubber cartel has at times been ruthless in its price policies; with synthetic capacity at its present level, the day of exploitation for natural rubber consumers seems past. Likewise, cotton has been made expensive through political action; there is a definite possibility that rayon may invade its field. Finally, silk faces the competition of nylon; the luxury product of old may be a beggar tomorrow. Accordingly, even where a firm has a monopoly, it might be well advised not to seek maximum revenue if this means a high price and restricted output. It may be that a lower price will lead to a high degree of consumption and still permit profits above normal.

Again, a firm cannot always be sure that it can exclude competitors. Even the most solidly entrenched companies may eventually find their dominance threatened. It would be surprising, for example, if after this war either aluminum or magnesium production were as closely controlled as they were before the war. In all likelihood the Pan American Airways system will also find competing lines entering much of the territory hitherto reserved for its planes. An electrical utility system may find a neighboring publicly owned plant attempting to invade its province. Such was the position of Commonwealth and Southern when the Tennessee Valley Authority brought the reality of cheap power to the South. The strong cartels in Sweden were challenged successfully by co-operatives. There is also the possibility of foreign competition in spite of artificial barriers to trade. All these considerations do not prove that monopolies are well behaved, but they do point to the wisdom of moderation.

Finally, the monopolist must consider the factor of public opinion. While consumers are notoriously unorganized, once they are aroused they can command appreciable power. They may take direct action through boycotts or they may attack the problem indirectly through political action. The whole panoply of legislation on the statute books directed against monopoly of one type or other shows the power of the slumbering giant. In Chapter II, we noted how profoundly this struggle affected the progress of American history. The fact that some of the great monopolists today, such as the electric power and the telephone industries, spend so much for good-will advertising and even for political lobbying indicates their fear of an aroused public opinion. While lower prices might be a better inducement for increased consumption of electricity, the recurrent advertising campaigns indicate at least that the days of "take it or leave it" are gone.

Before concluding the discussion of absolute control over the market, a brief explanation of monopsony is in order. A monopsonist is the sole buyer of a product just as a monopolist is the sole seller. Such might be a single firm in a small town which is the only consumer of labor services. In this case, it would be possible to pay a smaller price for labor than would be true were it necessary to compete for these services. Because of ignorance and the practical difficulties of moving to another locality, workers may remain for a long time where they are underpaid. Eventually, many will move out and the monopsonist may find itself compelled to bid higher for the labor of those who remained. But such adjustments take time. Another victim of monopsony is the farmer who sells to a single distributor. Over an extended period he usually takes what he is offered. Here likewise the situation is not permanent. If the seller is exploited, he may band together with his neighbors into a marketing co-operative. Perhaps the basic reason for labor unions is the necessity of labor organization to prevent employer monopsony or oligopsony. Not only does monopsony usually produce a reaction, but the expansion of communications threatens the geographical isolation or the state of ignorance which is often the basis of this type of exploitation.

#### IMPERFECT COMPETITION

While competitive and monopolistic industries have an important position in modern economic life, it is likely that most business activity falls into the intermediate position called imperfect competition. Here we have a type of competition which lacks the flexibility of both pure and perfect competition, but which also does not involve the absolute control which distinguishes monopoly. As we examine in detail the characteristics of this state, we find that in almost every respect there is some modification of the conditions necessary for a competitive market. Instead of an open market where full information is available to buyers and sellers, there may be considerable obscurity about conditions. As far as possible, sales prices are kept secret. The composition of commodities may also be considered restricted information. Custom, convention, or the fear of reprisals may inhibit freedom of action. There may be formidable obstacles to the mobility of capital, either preventing entrance into the field or impeding departure. Every effort will be made to differentiate products, so that substitution is discouraged. This permits different market prices for goods which are not too dissimilar in nature. Furthermore, sellers may be few in number. One may be of such a size that it is able to dominate the

field. When any or all of these conditions prevail, competition is definitely limited. Yet, none of these circumstances is such that monopoly could be said to exist.

There are many reasons for an imperfect market. For example, where transport costs are an important factor, local control over a market is possible to a limited degree. If there is only one producer in the locality, he would be able to charge more than the factory price of his nearest competitor. The amount of differential price would depend upon the cost of transporting the product from the next most favorably situated firm. Since this amount is naturally limited, local "monopolies" must be circumspect in their price policies. Furthermore, where the product is uniform, such as cement or steel, comparisons are easily made. Gouging under such conditions would involve the risk of alienating public opinion and provoking reprisals. Nevertheless, the tendency in the circumstances would be for the price to rise above the competitive level. Potential competitors would be likely to follow a similar policy, since they could gain nothing through a lower price. The cement industry, just mentioned, falls naturally into this pattern. As a result, the charge has often been made that prices in this industry are abnormally high.

Ignorance on the part of consumers brings about a psychological isolation not too different from geographical isolation. Buyers so often are governed by force of habit that they prefer a special label or purchase from a particular store regardless of small price differentials. In almost any city, there are stores which cater to the higher income groups, the ordinary downtown stores which appeal to the great mass of the public, and special low-price or cut-rate firms which seek the economy minded. Once a consumer develops a habit of patronizing one or other group exclusively, he is not likely to question particular prices. Thus, we have the occasional paradox of an excellent buy in the more exclusive stores (because of quality) and an overcharge in the cut-rate stores on certain items. A wealthy patron may get for one hundred dollars an overcoat of superb quality which will last him for ten years. His employee pays twenty-five dollars for a coat which is shoddy and worn after two years use.

One of the best-known types of imperfect competition is called monopolistic competition. This situation obtains where there is product differentiation on the part of numerous sellers. None of the sellers needs control a major part of the commodity, yet each strives so to distinguish his product from others that buyers will hesitate to shift to a substitute because of price differences. Slight variations in composition, special styles of packaging, and any quality which can be estab-

lished by sales appeal are often the only distinctive marks. An example of the triviality of some of these "unique qualities" is found in the report that Lucky Strike cigarettes experienced a sales increase when the color of the package changed. It was a fortunate sacrifice for them when "Lucky Strike green went to war." In regard to cigarettes, blindfold tests and concealed label tests show considerable inability on the part of smokers to pick their favorite brand by means of taste and smoking qualities. More distinctive are the various types of "krispy, krunchy" breakfast foods. While all serve the same general purpose, there are differences in composition and taste. Yet, any major price change might lead consumers to discover that great athletes might conceivably be developed by a rival food. The story is the same for toothpaste, shaving cream, aspirin, vitamin pills, gasoline, and countless other products. It would be an interesting experiment to catalogue the examples of monopolistic competition found in a single issue of a popular magazine or in a week's output of evening radio programs from a major chain.

From the viewpoint of the economist, the firm which has established product differentiation has something of the position of the monopolist. Its product is considered different from that of another firm. Insofar as this difference is identified with a trademarked brand name or a patented process, the entry of competing firms is precluded. As a result, the sales curve of this firm is not perfectly elastic. Cutting its price will not bring it customers in large numbers from competitors, nor will raising its price induce a mass exodus to a similar product. Generally speaking, the elasticity of its sales curve will depend upon the number and importance of the differences which it has established. It is hardly likely that a buyer will do without soap because a particularly favored floating variety is not to be had. On the other hand, it is quite possible that a purchaser of reconditioned typewriters or used cars might wait a considerable period until his dealer has the make he wants. Generally speaking, a producer attempts to make a good which is sufficiently similar to existing goods that he can share the existing good will, but differentiated enough to make his product unique in the minds of some consumers. Physical similarity and psychological difference seem to be the formula for success, since daring innovations have a high mortality rate and unadvertised commodities must run a severe competitive gauntlet.

Because of the variety of conditions which fall under the heading of monopolistic competition, it is difficult to make generalizations in regard to price policy. An approximate statement of the situation would liken monopolistic competition to pure monopoly as far as short-run price policies are concerned. The extent of the likeness will depend upon the definiteness and importance of the differentiation established. Where a product is considered to be really different in an important manner, a quasi-monopoly is established. Under these circumstances, it will be possible for a firm to act almost as a monopolist, seeking to fix its price at the level where marginal cost and marginal revenue are equal. It will adjust production policies and, if the advantage persists for long, production capacity at a level which will assure it maximum net revenue through production control. Nevertheless, in the long run it is unlikely that abnormal profits will persist. New firms will enter the market with a product which is sufficiently similar to attract customers from the original company. This will lower the sales curve of this latter firm. To sell as much as it did before it will be compelled to lower its price. It may try by sales promotion to hold its own, but this will serve to raise costs without permitting an increase in price. Thus, so long as freedom of entry and exit exists, it is unlikely that abnormal profits will persist in the long run. This certainly is true of most instances where there are a large number of firms with no single firm outstanding. The differences upon which product differentiation is based are too tenuous to defy successful substitution. Price, sales, or quality competition are bound to make inroads upon an unusually profitable firm.

Because profits tend to be normal in long-run monopolistic competition, it does not follow thereby that each firm is producing at its most efficient level. Such a situation is possible under competition only because each firm can sell all its output at the level of lowest cost without fear of its effect upon price. But in the case of monopolistic competition, there is always a limitation to the amount which can be sold at a given price. Any further increase in output would involve either a lower price or higher selling costs, both leading to declining net revenue. Thus, as a general rule these firms are operating under conditions of decreasing cost. Hence, the objection to monopolistic competition, from the viewpoint of economic efficiency, is not abnormal profits but inefficient production. There are often more producers and higher prices than is the case under competition. Cigarettes would be cheaper if each firm did not indulge in extensive selling costs in the effort to push its product. Milk would be less expensive if one dealer served an entire street instead of having five or six retracing the same route. Accordingly, monopolistic competition often has the inefficiency which is sometimes associated with monopoly, without the profits sometimes accruing to the latter. Conversely, many of the wastes attributed to competition really spring from monopolistic competition.

Except for the general statements made above, it is difficult to formulate laws for an industry under monopolistic competition. Since every effort is made to differentiate products, one can speak of an industry only in the loose sense. Where differences are slight and many firms are in the field, the industry effect will approximate that of pure competition. There will be more attempts at price competition and less reliance upon sales promotion. Here it will be more likely that firms will approximate their most efficient level of production and that price will be close to marginal cost at this level. On this basis, the low-cost firms are most likely to survive. On the other hand, where differentiations appear to be real and weighty, it is less accurate to speak of an industry situation. Here conditions are closer to modified monopoly than modified competition. Sales promotion and quality differences are the important weapons for these firms. Their main worry and the point which keeps them from being monopolists is the possibility of substitution and the entry of new firms with products similar to that well established. Hence their price policies are likely to be those of a fearful monopolist who is worried lest an abuse of his power bring reprisals upon his head. Probably their prices are lower than would be the case had they achieved simple monopoly, yet higher than those of firms whose product differentiation is less solidly established. Thus, in practice we are likely to witness a variety of situations in prices and profits, ranging from strict monopoly and well-established monopolistic competition to a more precarious monopolistic competition and strict competition. In the first two cases, the policies of each type of firm are analogous though not identical, and in the latter cases each type of firm and industry policies has similarity but not identity.

### OLIGOPOLY

Oligopoly is a form of imperfect competition which adds yet another division to the already numerous group occupying the ground between perfect competition and perfect monopoly. It obtains when sellers are few in number and any one of them is of such size that a change in his output will appreciably affect the market price. Should there be only two sellers, the condition is termed duopoly. The important feature of oligopoly is the fact that each seller must take into account the actions of his competitors. If he varies price and output, he realizes that this will in all likelihood provoke comparable changes by other firms. An underlying assumption in this analysis is the existence of a homogeneous product, so that substitution is complete and automatic once a price differential exists. For completeness of analysis, however,

there will also be a mention of the special type of monopolistic competition where a few sellers produce similar but differentiated products.

In strict oligopoly, no firm can act independently. It must always take into account the reaction of its competitors. If, for example, the Aluminum Company of America were to include in an extensive and expensive advertising campaign for its product, there is every likelihood that there would be some immediate success. New consumers would be won to the use of aluminum and customers might be weaned from a competitor. The same would happen were this corporation to indulge in price cutting. But the success would be short lived. Presently its main competitor would also initiate an advertising or price-cutting campaign. Probably producers of substitute products, such as magnesium, light steels, and plastics would likewise become more aggressive in their competition. Soon the market would settle into a new equilibrium, with no appreciable change from former positions in the matter of allocation of sales. But the firm which started the "trouble" would find itself with lower revenue because of increased selling costs or lower prices.

Under these conditions, a firm cannot have the comfortable assumptions which prevailed under the other forms of monopoly or competition. On the one hand, it cannot expand output until it reaches the point of most efficient production, since this might involve a change in the price situation. On the other hand, it cannot construct a sales schedule with the same ease that obtains in the case of the monopolist. Its sales curve will depend considerably upon the policies of other firms, as can be seen from the example given above. Naturally, then, the impulse towards collaboration will be strong. Possibly the group may be willing to accept some powerful firm as the price leader. Thus, in the steel industry the tendency would be for all firms to accept the prices of the United States Steel Corporation. Under this "umbrella" all firms may compete by means of various forms of sales promotion. such as advertising, service, aggressive salesmanship, and the like. Or it might be feasible to carry the program of collaboration still further by agreements to restrict output so as to maintain price. It would even be possible to have definite allocation of markets. The net result would be higher prices and probably higher profits than would be the case under competition.

The price policies of oligopolists will depend largely upon their relative costs of production and shares of the market. Where there is variation in costs of production, it is likely that the low-cost firm will set the price at the level which would give it maximum net revenue. Even if this is lower than the price which would be preferred by the

other firms, there is little that they can do about it. Aggressive competition on their part, either by sales promotion or by price cutting, could easily be met by the stronger firm. On the other hand, the probability is that they would still be making normal profits, since the favored company in seeking maximum revenue would make more than normal profit. Even if they could not make normal profits, the low-cost firm could let them founder and thus strengthen its own grip upon the field. The chances are that it will not be too ruthless, lest their departure be an invitation for a more modern and efficient company to enter the field.

Where firms have almost identical marginal costs and equal shares of the market, there will be no difficulty in regard to price. Each will be in the position of a monopolist, with the possibility of setting a price which will yield maximum revenue at the point where marginal revenue and marginal cost are equal. On the assumptions of the case, their sales, revenue, and cost curves will be about the same. Accordingly, they will arrive independently at the same price. This would not be the result, however, where the shares of the market were unequal. Such disparity would involve a difference in sales curves. Under these conditions, paradoxical as it may seem, it is probable that the weakest firm will set the price. If the stronger firms were price leaders, it is likely that in seeking maximum revenue they would set a price which would restrict sales considerably. This would affect the weaker firm in a disproportionate manner, since it would leave it producing at a level in its marginal cost curve where there would be considerable disparity between marginal cost and marginal revenue. The result would be price cutting by the weaker firm until it reached the point of most profitable production. The other firms would be compelled to meet this price, even though they did not obtain maximum profits.

The theoretical analysis given above explains the divergence of policies in actual economic life. Where costs are unequal, it is natural to expect a program of price leadership, with the low-cost firm setting the price. Where they are equal, the expectation would be that a market-sharing program would be initiated. If this is not feasible, then occasional price wars will be the result, with the more established companies compelled to accept the price of the firm having an unequal share of the market. Even a casual knowledge of the history of American industry will furnish abundant illustration of this variety in policy.

Long-run adjustments in oligopoly depend upon profits and ease of entry as regards new firms. If profits are well above normal, there will be a tendency for new firms to enter the field. Nevertheless, there may be special conditions which permit the long-term persistence of unusual profits. If, for example, the oligopolists jointly control the raw

material for their product, such as iron one, they can exclude any new firm from the field. Again, the initial investment may be so high that capital hesitates to flow into the iudustry, since it may be uncertain whether or not added competition may make all the firms unprofitable. Since these conditions do obtain in many heavy industries, oligopoly and oligopolistic profits have been able to persist over considerable periods of time.

A similar line of reasoning applies where oligopoly is added to monopolistic competition. Here we have product differentiation, but only a few sellers. Under these conditions, a firm is concerned not only with the possibility of product substitution, but also with the reaction of its policies upon the other firms in the "industry." The result normally is a nonaggressive price policy which will permit more than normal profits over long periods. It is felt that price cuts will be met by firms producing similar products and that differentiation would not be enough to overcome the attraction of lower price. Such is the case with the automobile and typewriter industries. Each firm tends to have certain standardized price levels which are identical with those of its competitors. Competition between them is normally along the lines of sales promotion, service, and attempts at emphasizing differentiation. Since entry into these industries is difficult, because of heavy investment needed for equipment, sales and service facilities, and the like, they are relatively secure in more than normal profits. Furthermore, new capital may hesitate to enter lest sharing the market reduce every firm to less than normal profits. Accordingly, under these special circumstances it is possible to have monopolistic competition with both prices and profits above the level that would be set by pure competition.

The equilibrium reached in either monopolistic competition or oligopoly is rarely stable. Firms are constantly trying to encroach upon the others' market. In the former case, the preferred method is through sales promotion and emphasis upon quality and other differentiating marks. Once this procedure has been initiated, it is almost impossible for a firm to desist from aggressive promotion. A firm which did not advertise would soon lose its market. Furthermore, there is always the possibility of surreptitious price cutting. Thus, even though the automobile firms may have stabilized wholesale prices, dealers may shade the price a little in the effort to make a sale. Typewriter salesmen may be generous in their allowances for models turned in or liberal in their application of special discounts. Secret price cutting, however, is more likely to characterize the dealings of oligopolies. Concessions may be granted to favored buyers in any of a dozen ways. Publicly the price

is maintained, but quantity discounts inappropriately applied, absorption of freight charges, special allowances, and the like actually mean a price cut. This is one of the "evils" which constantly plague oligopolists, until a periodical revival meeting is held and they all agree to reform. In some industries, firms "take the pledge for life" at least once a year. The extent of price cutting can be gathered by skimming through the various codes of fair competition established under the National Industrial Recovery Act. Indeed, it would hardly be an exaggeration to state that concern with price cutting was one of the major preoccupations of the industries framing the codes.

Imperfect competition can also prevail between purchasers as well as sellers. Thus, an oligopoly may be the only buyer of a specialized product. When a group of firms practically control the demand for an economic good, they are able to influence its price. In fact, it has been charged that some industries are practical overlords over their subcontractors and subsidiary industries, dominating over the minutest details of their production and price policies. Obviously, when a firm or group of firms sells only to a restricted number of other firms, it could happen that they lose other markets and thus relapse into complete dependence. The oligopsony would be powerful enough to shift its demand elsewhere or even to build its own plants if it cared to do so. Hence the subsidiary must submit to prices and profits dictated by the purchaser of its product. Normally an oligopsony is nonaggressive in its price policies, preferring to keep the price of goods it purchases low, rather than bid them up through vigorous demand. All the techniques of agreements, market-sharing, and the like which were effective in the selling policies of an oligopoly will be equally effective in the buying policies of an oligopsony. In this way, substantial control over sellers is achieved.

#### CONCLUSION

In summary, then, the economic picture contains two extreme positions and many intermediate stages. At one extreme there is pure or perfect competition. Here many sellers and buyers compete, with the former producing at their most profitable level and seeking a price that equals marginal cost at that level, and the latter governed by weighted marginal utility in their choice of purchases. At the other extreme there is the monopolist with his sales curve based on estimated sales at various price levels. The monopolist cannot of necessity produce at his most efficient level, since in his case the level of output is bound to affect price. His price is set at the point of maximum revenue, where marginal revenue and cost are equal. Between these extremes is found monopolistic competition and oligopoly, which share the position of the monopolist, subject to the limitations of substitution, entry of new firms, and possible reaction of other firms in the field.

The treatment of price has been of necessity complex, inasmuch as it reflects an economic system which is intricate and variegated. Any simple approach to the matter would inevitably be unreal, for it would depend upon assumptions which are rarely approached in practice. Such indeed has been the reproach leveled in the past at economic analysis, that it constructed hypothetical laws upon unrealistic assumptions. Certainly there would be merit in this complaint, if the entirety of economic analysis were to consist of a plea for perfect competition and a delineation of the results which would follow upon this happy state. Fortunately, economists reacted to criticism by perfecting the instruments of analysis, not by abandoning the attempt to discover law in the midst of thousands of concrete situations. With the study of monopoly and imperfect competition, the broad outlines of the field have been covered. There still remains a great province for further study. Important segments have been barely touched. But at least the trend is in the right direction. On the one hand, theoretical economists have developed their formulations until they approach closely to reality. On the other hand, research students have constantly enlarged the body of factual knowledge upon which theory can be based and to which it can be applied. As this tendency grows, the unfortunate breach between theory and practice, and between principles and problems, can be narrowed and ultimately filled.

The remaining chapters of the book, including the discussion of alternative socioeconomic systems, will treat of the practical application of the principles just analyzed. The following chapter will attempt to visualize the different theoretical situations in their concrete application in modern American industry. Then, an appraisal of these conditions from the viewpoint of their social effects will be offered. These general considerations will be followed by specific application to concrete fields of activity, such as international trade, agriculture, consumer problems, and public utilities. Next problems of long-term equilibrium, such as those dealing with economic expansion, monetary policy, and business cycle policy, will be analyzed. Finally, problems generally associated with the distributive function of exchange will be treated. This involves the discussion of taxation, rent, interest, profits, and labor. In all this treatment, the ideal sought will be a combination of realistic analysis with well-balanced description of the entire economic and social milieu in which these problems occur. Economic law

applies equally to alternative socioeconomic systems. Socialism, for example, must also face the problem of the best use of resources and the exchange of goods. Accordingly, economic theory can be said to be practical in the best sense of the word.

A practical illustration of the points just made will be had in England under the program of socialization promised by the Labour Government. Thus, for example, if the coal and steel industries are nationalized, there still remains the problem of decreasing costs and increasing their production. The fact that these industries lack modern equipment and the most efficient methods cannot be waived aside by a change in government. If they are to compete on a free world market, they must lower costs by efficient, low-cost production. Of course, it is always possible for a government to practice price discrimination and dumping, by charging only variable costs in world trade and leaving the domestic market to absorb the fixed charges. Possibly such a practice could be defended when imports are vitally needed and can be paid for only by such means. Nevertheless, such desperate measures merely permit a nation to hold on, they do not raise standards of living. Only an increase in productivity can bring about real betterment. It may be that economic planning can effectuate such an increase in productivity, but modernization and efficiency programs should also be included in this planning. Then with increased production, socialism can show whether it can bring about better distribution than was the case under capitalism.

#### READINGS AND REFERENCES

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## Competition and Monopoly in American Industry

In the course of the theoretical study of price situations, occasional allusions by way of example were made to existing American conditions. A more thorough illustration of theory in terms of actual practice is needed, however, so that the concrete importance of price policies will be realized. Once the general principles are mastered and recognized in their concrete manifestations, the way will be prepared for a consideration of the social implications of the price structure. This material will complete the general study of price and permit subsequent treatment of more specific illustrations taken from various basic fields of economic activity. Accordingly, the present chapter will be devoted to a treatment of American economic life, as it manifests itself through price characteristics. The following chapter will draw general conclusions as to the most suitable practical attitudes towards price, in the effort to promote general public welfare.

#### INDICATIONS OF COMPETITION AND MONOPOLY

Any attempt to portray the many price policies obtaining in current American conditions demands heroic condensation. The field itself is immense, and the literature describing it hardly less so. Arbitrary decisions as to order of treatment, inclusion, and exclusion are inevitable. In this chapter the presentation will follow to a large degree the excellent monograph, Competition and Monopoly in American Industry, prepared by Clair Wilcox for the Temporary National Economic Committee. This work sums up the extensive research material gathered

<sup>&</sup>lt;sup>1</sup> TNEC monograph 21. The other general monograph on price, Price Behavior and Business Policy (monograph 1) emphasizes the behavior of prices themselves rather than the underlying structural situations which bear on price. There would be no purpose in listing the subjects covered in the hearings, since all of them bear on price situations, with the exception of Part 9, Sachegs and Investment. Other notable studies of price include A. R. Burns, The Decline of Competition (McCraw-Hill), and W. Hamilton and others, Price and Price Policies (McCraw-Hill).

for TNEC in a manner which best harmonizes with the theoretical study of the preceding chapters.

It is not easy to determine in particular cases whether or not competition is substantial. Any general rules laid down as indications of monopolistic intrusions are subject to major exceptions. Thus, price uniformity can obtain even where there is considerable competition, while oligopolists occasionally indulge in price cutting and even price wars. Price inflexibility is often considered a sign of substantial control of the market, yet custom often leads to unchanging prices conjoined with real competition. Unused productive capacity could result from curtailment of output in the effort to sustain prices, but it could also be characteristic of a declining competitive industry, faced with decreasing demand. On the other hand, monopolistic industries may expand output in order to obtain the economies of large-scale production. Again, the rate of profits gives no infallible assurance of monopoly or competition, since the former is sometimes unprofitable and the latter not infrequently has high temporary profits. The same reasoning applies to other so-called symptoms of monopoly. The number of firms, frequency of entrance into and exit from an industry, and the like are not by themselves sure indications of the price structure obtaining in a given field.

The problem is not necessarily solved by using a combination of the above guides, although the probability of exceptions is lessened when many signs of control are present. It is safe to say, however, that where these restraining factors are absent, a high degree of competition is to be expected. Where prices vary frequently between firms and over periods of time, where the volume of production is maintained at the onset of a depression, where productive capacity is largely utilized during all phases of the business cycle, and where profits are moderate and entry and exit of firms is frequent, there is every likelihood of competition in an effective manner.<sup>2</sup>

An important indication that some degree of price control is probable is given by the high degree of concentration obtaining in many industries. The data on concentration of assets, income, employment, and output, noted in Chapter V, afford a presumption of ability to control prices. Identity of bids on government contracts, concerned with numerous commodities over long periods of time, can hardly be attributed either to competition or coincidence. The fact that price rigidity over extended intervals, including both prosperity and depression, is found in over fifty important products is not without significance. Where prices hold in the face of declining demand and increas-

<sup>&</sup>lt;sup>2</sup> Adapted from C. Wilcox, op. cit., p. 20.